

# MOTOR AGE

## MOTORING TRIP TO YOSEMITE VALLEY



GETTING READY FOR A HUNT

A TRIP to the Yosemite valley in a motor car was not on the program of R. E. Massengale when he left the east to visit wonderful California. Not until he arrived in Los Angeles did he dream of such a pleasure. Joining a friend in San Jose, the two started for the valley in a little two-cycle motor car—little because it weighed only 930 pounds loaded with fuel and water. It had two cylinders, was rated at 10 horsepower, and was built in the city of San Jose. The carrying space behind was loaded with bedding, a tent and two suit cases. The tent poles and fishing poles were strapped on the side. At first the tourists expected to do most of their own cooking, but as neither of them was a culinary artist they relinquished the idea for fear of coming to death and decided to get something to camping out—get something convenient and sleep outside during the trip.

It was the intention to go overland in the car all the way, but on inquiring they learned that portions of San Joaquin valley over which they would have to pass were flooded and that it would really be necessary to run to San Francisco, then take the boat to Stockton, where they could start with the car without being handicapped by overflowed roads. The road from San Jose to San Francisco was good and the distance to Oakland, some 50 miles, was covered in 1 hour and 35

minutes without much trouble or hurry. "Here we took the boat across to the once great city of the Golden Gate," said Mr. Massengale in telling of the trip. "In 1904, during the Knight Templar's conclave, I saw the city in its glory. Now it reminded me of a great cemetery. The few great buildings standing looked like great monuments. Having a little extra time, we drove around the burned district and then ran our car to the boat and arranged to ship it. We also procured passage and a stateroom for ourselves. We left the city about 6 p. m. and arrived in Stockton next morning about 8 a. m. Our car was the first thing to be unloaded and immediately after paying the freight on it, which was \$2.60, we ran to a garage near by, filled up with gasoline and inquired our way. As luck would have it, we chanced to meet a man who was traveling in a motor car selling harvesting extras and was well acquainted with the country on the plains we had to travel. He gave us a route that cut out the deep drift sand between Modesto and Merced, a stretch of sand 12 miles wide that often stalled the largest powered cars in summer time. In spring and winter, however, it is said to be passable in nearly any car.

"Leaving Stockton, we ran to the little town of Oakdale, about 26 miles from the former place. The road was good all the way and we had but little trouble finding it, asking the directions only once after leaving Stockton. Oakdale is quite a pretty little place, surrounded as it is by numerous oak trees. The streets also are all lined with trees, making the place look cool and cosy. As it was not quite noon, we inquired our way to the next place and



STOLEN FRUIT ALWAYS SWEETEST

soon were on our way to Waterford, 12 miles distant. Though we had two long, low hills to pass over and a few short stretches of sand, we made the run in just 40 minutes. From this place we followed along a branch of the S. P. R. R., passing through the little towns of Heckman and Montpelier. We never were out of sight of several huge combined harvesters drawn by twenty-six or thirty horses or mules to the machine. After following the railroad north within a quarter of a mile of a little station called Rier, we turned eastward until we came to the Merced river, whose source is in Yosemite valley. Along the river banks were fields of corn and every known vegetable. In one place there were acres of watermelons. We left the river and soon passed through the little hamlet of Rotterdam, and thence to Merced, a town of 3,000 souls. Here we made inquiries about the road ahead and were told to inquire of the president of one of the banks of the place, who advised us to proceed to Berenda, a town 20 miles farther south, then turn east to Raymond and follow the stage road into the valley. There was a short cut, he said, by the way of Le Grand and Mariposa if we cared to try it. He thought the road was badly cut up, but it would save us many miles, also we would have the advantage of not meeting any stages until we would come to Wawona, about 20 miles from the valley.



MEETING A RANCHER



GLACIER POINT—A MILE DOWN

"As two cars had just returned from over the cut-off, we decided to try it. Early next morning we were gliding toward Le Grand, 18 miles distant. Here we were lucky enough to meet J. C. Cunningham. This was another streak of luck, as he was perfectly familiar with all roads leading into the valley, having been over them many times. He advised us to go by way of Berenda and Raymond on account of the steep grade the other side of Mormon Bar and the long steep one from Cold Springs to the summit looking down on Wawona. These hills were several miles long and he had his doubts that any cars, regardless of power, could take them on the high speed on account of their steepness and roughness. There were two advantages in taking it, however—no stages, only a mail wagon, few teams, and much shorter. In fact, he said we could be at Wawona while we were going around by Berenda to Raymond. We decided to go by the cutoff, but before starting we filled our gasoline tank and also stored a 5-gallon can. Bidding good-bye to our newly-made friend, we soon were careening along toward the blue-looking, snow-capped mountains in the east. Before noon we passed Lewis, a stage station and postoffice. Here we commenced to climb More hill, our first long hill since starting out. I should judge it was about 4 miles long, and it

put us on the low gear once or twice. At the top we struck the first pines and everything ahead looked mountainous. Throwing off the switch we coasted nearly the entire distance down the grade. The road was certainly rough, covered with boulders in some places as big as a man's head and in other places there was dust a foot deep. We were fortunate in meeting only two teams, and though we traveled slowly we arrived at the old mining town of Mormon Bar about 1 o'clock, where we had lunch.

"Immediately after lunch we started for Wawona, which was said to be only 25 miles distant, but we never will believe it. We commenced right away to climb a mountain that put us on the low speed and kept us there nearly all the way. We could have run on high in places, but there were so many rocks and ruts it was really necessary to creep. In fact, the car did regular contortion acts. As such low gear work heated up the car and we could go faster afoot one of us walked while the other ran the car. By leisurely taking our time and stopping under shade trees that stood thickly on both sides of the road we reached the top sooner than we anticipated. We were now really in the mountains. We had only short stretches of down hill and very little level road to travel over.

"At a place called Boot Jack, a little wayside house, saloon and hotel, the proprietor told us there were two big ten-horse teams ahead of us and that we might meet them any time. After passing Boot Jack a few miles we came to a nice, easy graded road and was taking it on the high speed when we saw dust ahead, just around a turn. It was about the narrowest place we could have met a team and we knew there was nothing to do but to reverse and run back, as no team could pass us where we were. It was the two ten-horse teams and I can assure you we lost no time going back nearly a quarter of a mile, where we ran the car into some brush. The teams passed in time and we could not blame the teamsters for being cranky. Although the horses could not see the car, they must have smelled it, for it was almost impossible for the drivers to get them past.

"Moving on we passed an old stage station called Cold Springs. The buildings are old and dilapidated, but the place is in a beautiful location and derives its name from the big cold spring near the dwelling. We stopped here to rest a few minutes and put some of the cold water in our radiator. Leaving Cold Springs, we commenced the climb of the famous Cold Spring grade. The scenery from the road was certainly grand; looking ahead and to the right you could realize that you were following a deep chasm. In all directions, clinging to the mountain sides, are cone-shaped pines, firs and cedars. So dense is this forest of trees to the south and west that hardly a spot of ground can be seen for miles. A roaring stream of water is heard long before it can be

seen, and ferns—such large ones I never heard of. This grand canyon alone, though not comparing in grandeur with the Yosemite, is well worth the trip. Often I stood admiring the scenery when the sound of the purring little motor following me told me to move on. What a change in the atmosphere, too. Though the morning had been almost stifling warm when we left the plains, the atmosphere had changed from the languorous summer heat to the ozonated elixir of spring.

"A short distance from the summit, where an old log is hewn out and made into a long water trough that is kept full by a purling stream that runs down from the mountain side, we found a crowd of campers. They were returning from the valley, and a horse having gotten sick they had stopped for the night. Though the road was not very wide, they had placed their two wagons so there was plenty of room for teams to pass and still have a little space left for a camp fire. There were six in the party, all men, including the Japanese cook. They were a crowd of sociable fellows, and when I told them I envied their camping outfit and told them of our outfit consisting only of bedding and a tent, they insisted on our stopping over night with them, which we cheerfully agreed to.

"The cook was at once ordered to prepare food enough for two more people and we placed our car so it would in no way obstruct the road. While supper was being cooked we all prepared our beds. We spoke of putting up our tent but our friends said it was entirely unnecessary. 'Just scrape up a few pine needles, place your tent on top and spread out your blankets,' they said.

"Supper was called early and it is hardly necessary to mention that we all did it justice. We did not eat it on the ground, but on a table with removable legs. This table was placed squarely in the middle of the road, the only place possible to put it. If anyone had been passing along it would have been necessary to lift it out of the way. All had stools to sit on with the exception of one and an empty dry goods box was substituted. I thought of the



IN CAMP AT WAWONA





FISHING AT WAWONA

would-be high-toned restaurants I had eaten in since I left the east and how this meal excelled them all, though cooked out in the wilds. We had hot cakes instead of bread, potatoes stewed with onions and bacon—miners' style—beans, cold ham, canned smelt, canned corn, olives, honey and even wine.

"The little engine did a great deal of spluttering next morning before it got down to business; it would skip and miss and cut up all kinds of capers, but after tickling the carbureter a few times it resumed its normal condition and began to purr like a kitten. It was quite early when we reached Wawona. As there were several things of interest there—the big trees, Chilnualna falls and the fish hatcheries, etc.—we decided to stay a few days. After lunch we visited Chilnualna falls, a short distance across the river. But for the several leaps the water makes this would be the highest falls in the world. In the evening we visited Stella lake, a short distance above the hotel, and took a moonlight boat ride.

"The next day we intended visiting the big trees in our car, but the proprietor of the Wawona hotel, who owns the stage line into the valley, also the roads, made a proposition to us to leave our car and be passengers in one of his stages. He would give us a free pass and would charge no toll. He said the reason of this was that many tourists would not go on the stages if they expected to meet a motor car. We agreed to his proposition and accompanied a stage load to the grove of big trees. It is hard to say which of the trees is the most conspicuous, as they appeal to a variety of sentiments. If you admire the tall and willowy outline, there is the Columbia in the upper grove, reaching skyward 323 feet; if sturdiness and vigorous growth appeal to you, there is the Mariposa, a colossal tree in girth and height; if tenacity of life and as a freak, then you will admire the Telescope—almost 200 feet as a skeleton it stands with its entire heart burned out so you can look through it from bottom to top; if your admiration be in viewing fallen mon-

archs, then there is one aptly named for you—it is the largest stick of timber lying on the ground; if you admire trees spanning driveways, with improvised roads cut through them as they stand erect, view the symmetrically beautiful Wawona and California; if you admire majesty, size and age, stand beneath the Grizzly Giant. There are many over 100 feet in circumference. The Haverford, named for a university, is 120 feet in circumference at the ground. This tree also is a freak, as it stands on three legs or pillars. Twenty horses can stand in the hollow at its base. The most picturesque part of the park—in fact, the grandest forest display in the world—is at the Guardian's cabin in the upper grove, where more than fifty large trees are in view. A pavilion stands within the shadows of the General Grant, the General Sheridan and the General Sherman. These are certainly worthy monuments to those illustrious soldiers and statesmen. Two of these trees placed side by side would more than block State street in Chicago.

"We had lunch under the shade of some of the monarchs, and altogether spent a most enjoyable day. That evening we visited Hill's studio, which is a treat in itself. We also tried to make arrangements to go into the valley early next morning before the stages started, but the proprietor again offered us free transportation, including camping outfit, providing we would leave our car and ride in the coach. We were a little reluctant about it at first, but when we learned that the floor of the valley was nearly all covered with water, caused by the unusually warm weather which melted the snow above it, we accepted his offer. I might as well say here that we were glad we left the car, as it certainly would have been but little use to us in the valley at that time. The next morning found us aboard the stage, which was fantastically painted and drawn by four splendid horses in shining harness. Though we admitted it was a nice turnout, we could not compare it with the motor car. We reached the valley and immediately hunted up the guardian's office and got permission to camp. The place was in a little clump of pines, a few feet from the river. Here we spread our tent and arranged our cuts.

"We made arrangements to eat at the hotel, but later bought a cooking outfit just for the novelty of it and did some cooking ourselves. I might remark here that some of the dishes we produced were really novelties in a way. We were not aware before going into the valley that we could get camping accommodations at Camp Curry, a place where you eat in a big tent and can get separate tents to sleep in at \$2 per day. In this way you can get nearly all there is in camping. However, we were perfectly satisfied with camping.

"I will not try to describe the valley, as the world has already been entranced

by the stories of this wonderland from the great writers of prose and verse who have exhausted language and inspiration in a vain endeavor to describe its beauty and majesty. In the register at the guardian's office, where all are supposed to write their names, is a space left for remarks at the end of each name. In one place I read after a name: "Grand Niagara, Beautiful Yellowstone, but Lovely Yosemite." Such is my opinion of the valley. We remained in the valley 2 weeks, fishing, climbing dizzy ladders and riding long-eared mules over zigzag trails. We had the time of our lives and left vowing we would return the next summer vacation we had.

"Returning to Wawona, we filled our oil reservoir and gasoline tank of our car and started homeward one morning very early, and in less than 6 hours we had left the balmy atmosphere of the mountains and were under the sweltering sun of San Joaquin valley. We returned by the same road we came on account of the objections to motor cars on the stage road. We should have liked to go a new route, but the proprietor of the stage line certainly had treated us royally and we felt under obligations to him. We arrived in San Jose the third day at noon after leaving Wawona. Our trip was one of the most convincing arguments of the joys of motor-ing that I ever have experienced."



GRIZZLY GIANT, 224 FEET HIGH

## ROADS OF THE WORLD

### Valuable Data Is Furnished Touring Committee of the Automobile Club of America

New York, March 2—In response to a general request issued by the touring committee of the Automobile Club of America, Charles J. Glidden has given over some of the data obtained in his world travels in a motor car, as follows:

Afridis, country between India and Afghanistan—Excellent roads; obtain permission from political agent at Peshawar; can drive only 30 miles on a Tuesday or Friday; road principally known as the Khyber Pass.

Annam—Frontier can be reached from Saigon, Cochin China, on a good road; no good roads in Annam.

Australia—Bond required on entering country by customs; can drive 200 miles west of Melbourne on good roads; can drive from Melbourne to Sydney on bad roads. Other roads, except in proximity to large cities, bad.

Burmah—Deposit or bond on entering; roads bad, except near Rangoon and Mandalay.

Ceylon—Excellent roads for 4,000 miles. Deposit on entering.

China—No roads except in and around treaty ports. Deposit on entering.

Fiji—Fair roads for 20 miles.

India—Good roads to frontier of Afghanistan and from there to Calcutta, with several diversions starting at Bombay. Also good roads south. Some rivers have to be forded. Deposit on entering. Call on Bombay Motor Co., which will make all arrangements to land.

Japan—Bond on entering. Poor, narrow roads and bridgeless streams. Heavy grades undesirable to motor across country. All right near big cities.

Mexico—Deposit on entering. Limited mileage of fair road near Mexico City.

New Zealand—Deposit on entering. Roads good, fair and bad. Scenery grand. Natives interesting; worthy of a visit.

Straits Settlements—Excellent roads commencing at Singapore; about 100 miles without duplicating.

Malay—Excellent around principal ports and for some distance into the country. No duty.

Swat, country between India and Afghanistan—Good road for 10 miles. Protection required and permit from authorities at Malakand.

Sweden—Duty deposited on entering. Roads fair to bad from southern end to Arctic circle. Grades very steep.

Egypt—Limited around large cities.

Russia—Fair roads; but not connecting in all cases. Gasoline can be obtained everywhere by making arrangements in large cities.

Mr. Glidden says the following steamship companies will carry motor cars as

freight without insisting that they be crated: Cunard line, from Boston to Liverpool; English channel steamers, North Sea steamers, from England to the Netherlands; Baltic Sea steamers, from Denmark to Norway, Sweden and Russia; French line, from Marseilles to India, China and Japan; all lines between Burmah, India and Ceylon; all lines between Singapore and Java; Canadian Pacific line, from Vancouver to Honolulu, Fiji, New Zealand and Australia; Union line, from New Zealand to Tasmania and Australia; German line, from Singapore to Siam.

### TAUNUS WANDERPREIS

Berlin, Feb. 16—The representatives of the five clubs which, under the initiative of the Frankfort Automobile Club, have decided to organize for next year an important motor contest, which will be the continuation of the Herkomer tours under the name of Tourenfahrt durch Sueddeutschland um den Taunuswanderpreis, or tour through the south of Germany for the Tourist trophy, held a meeting recently in which some of the regulations for this event were determined. The most important decision is the one pertaining to the sealing of engine bonnet and radiator, which only can be opened by or in the presence of official representatives of the race committee. This measure will avoid the necessity for the observers. The competition is to start August 28 in Frankfort, and on the first day the road will lead to Stuttgart and Triberg in the Schwarzwald; on the second day from Triberg to Strassburg through Muelhausen; the third day through Baden-Baden, Karlsruhe, to Mannheim. August 31 is rest day. A speed race will take place September 1 on the flat road from Mannheim to Seckenheim. In the afternoon of the same day a hill climb will be held on the Koenigstuhl. In the evening there will be a banquet and distribution of prizes. Prizes amounting to \$18,000 are now in hand, but more are expected. The competing cars will be divided into three classes, as follows: First—4.365 pint to 8.65 pint cylinder capacity; second—8.825 pint to 12.60 pint cylinder capacity; third—12.775 pint to 19.25 pint cylinder capacity.

### GOLD CUP TOUR ENTRIES

New York, March 4—The 30-horsepower Welch touring car which won the American touring car championship at Ormond beach last month has been entered in the American gold cup tour, which is to invade Europe in July and August in a 4,000-mile journey through France, Spain, Italy, Austria, Germany, Belgium and England. The entries already received besides the Welch include the Thomas, Pierce, Cadillac, Packard, Stearns, Moore, B. L. M. and Columbia. Among the individual entries already received is one from Vancouver, another from Alberta, B. C., and a third from Fort-de-France, Martinique.

## MAKES WORK FOR ALL

### Chairman Hower Divides Touring Board Into Committees—Route Is Undecided

Buffalo, N. Y., March 2—Chairman F. B. Hower did not anticipate a large attendance at the first meeting of his new A. A. A. touring board, which was held in the rooms of the Automobile Club of Buffalo yesterday. Of the seventy-seven appointed eight were present at the session—Chairman Hower and Secretary Lewis, of Buffalo; Philip S. Flinn, of Pittsburg; L. E. Myers and N. H. Van Sicklen, of Chicago; Robert E. Hopkins, of Tarrytown, N. Y.; Elliott Flint, of Providence, R. I., and Mr. Otis, of Cleveland. The last named was not a member of the committee but represented Cleveland interests in the absence of Charles H. Colt.

No action was taken on the Glidden tour proposition, that matter going over for the next meeting, which will be held in about a month. Still the various routes suggested came in for their share of attention, although none of those at the meeting would express his views one way or another for publication. The only Glidden information given out was in the shape of a letter from the Automobile Club of Buffalo asking that the deed of gift of the tour be changed to prevent future ties. This letter was from President Seymour P. White and was as follows:

"The president and board of directors of the Automobile Club of Buffalo beg to submit to you the following facts: This club is at the present time the holder of the Glidden trophy by means of a consistent construction of the deed of gift, which in the event of a tie gave to the holding club a continuance of that holding. Gratifying as the result may be to this club, we are satisfied that other clubs and individuals can reasonably raise serious objection, which may go so far as to jeopardize the trophy as a matter of competition. We therefore feel that it is in proper spirit for us to suggest such changes in the deed of gift as may enable all entrants to start on the Glidden tour for the coming season on an equal footing so far as competition is concerned. While we have no method to suggest to you in that particular, feeling that you can work out the terms, we feel that the end in view should be accomplished and that an entirely satisfactory arrangement should be made in the event of a number of cars being tie for first position at the end of the run. All of which is respectfully submitted."

Four committees were made up from among the seventy-seven members of the board, the executive committee being given full charge of all touring competitions sanctioned and recognized by the association. On this committee are F. B. Hower and D. H. Lewis, of Buffalo; Philip S.



Flinn, of Pittsburg; L. E. Myers, of Chicago, and James B. Dill, of East Orange, N. J. The foreign tours committee, of which L. E. Myers, of Chicago, is chairman, will have twenty-seven members. Its duty will be to assist the board and its executive committee in all matters relating to tours by individuals in foreign countries, including the gathering of information as to registration, speed laws, customs, rates and duties and transportation rates in such countries. The road signs committee, Philip S. Flinn, Pittsburg, chairman, has twenty-six members, and it will assist the board and its executive committee on formulating the plans whereby the trunk roads of the country shall be marked with road and distance signs, either through the aid of local laws and authorities or by co-operation with clubs and state associations. The touring information committee, James B. Dill, chairman, will have twenty-six members, whose duties are to assist the board and its executive committee in establishing in the office of the secretary of the association a bureau of touring information.

#### HOPE FOR SHIPPERS' BILL

Indianapolis, Ind., March 4—A solution of the shipping problem which has confronted Indiana motor car manufacturers for years is believed to be nearing a happy solution. The ray of hope is in the shippers' bill which already has passed the Indiana house of representatives intact and gives promise of passing the senate without difficulty. The bill which has passed the house provides under penalty that railroads must furnish cars for shipping purposes promptly. When loaded these cars must be moved at least 50 miles in each 24 hours, Sundays, holidays and unavoidable accidents excluded, and allowing 24 hours for passage through terminals and transfer stations. The shipper is to be allowed 48 hours' free time for loading and the consignee an equal length of time for unloading. If cars are released 24 hours or more before the expiration of the free time, a rebate of \$1 on each car is to be allowed. The shipper or consignee is to pay \$1 for each 24 hours held over the free time. It is provided that cash settlement of all claims under the bill must be made monthly.

#### DEALERS HOLD ELECTION

Chicago, March 2—The annual election of the Chicago Automobile Trade Association Thursday resulted in the choice of Joseph F. Gunther, manager of Thomas B. Jeffery & Co.'s branch, as president; Henry Paulman, Pierce agent, as vice-president; Walther L. Githens, of the Githens Brothers Co., as treasurer; Fred E. Dayton, manager of the Chicago branch of the Electric Vehicle Co., as secretary, and Ralph Temple, Orlando F. Weber and C. F. Cornish as directors. The association went on record as favoring the Chicago show being held in December.

## NO COMPETITIVE TOUR

### N. A. A. M. Against Individual Contest, But Will Support a Club Team Competition

New York, March 6—Special telegram—At its monthly meeting today the N. A. A. M., after a preliminary conference of its contest committee with Chairman Hower, Secretary Lewis and Philip Flinn, of the A. A. A. touring board, reached a conclusion unfavorable to participation in a competitive tour in the ordinary sense of the word, though it would if necessary support a tour embracing club team competition with only such rules as to compel finishing the day's run within a reasonable time. A resolution was adopted in effect that in the opinion of the association it is neither desirable nor advisable for its members to compete in any competitive tour such as is contemplated by the A. A. A. and the A. C. A. during the season of 1907. The committee further adopted the following:

Resolved, That the executive committee of this association recommends, as a result of the earnest consideration it has given to the subject of contests generally, that this association offers to the A. A. A. the following recommendations:

1—That all competitive features of the annual tour of the A. A. A. be eliminated and that, instead of a test as heretofore conducted, the A. A. A. promote a pleasure tour without any competitive features whatever.

2—Falling the acceptance of the foregoing suggestion, that the contest, if the A. A. A. determines to promote one, be between club teams, of not fewer than ten or as many as any club cares to enter, the prize to go to the club the greatest percentage of whose entries succeed in reaching the destination, such contest to be governed by such simple rules as will merely compel competing cars to reach the night stops at a reasonable hour under their own power.

In a word, the suggestion is made that the Glidden cup be made a club trophy, and the association will not support any contest that calls for the elimination of competitors until a single car remains as winner. Chairman Hower, following the meeting, stated emphatically his opinion that a tour would be run on some sort of a competition basis. A suggestion made by the Motor Age correspondent that there be two controls—at noon and at night—and that each car be penalized a point for each minute late, and that these be the only restrictions, is receiving considerable attention and no little favor. It fits in with the present situation in that a further suggestion included that the trophy go to the club having the largest percentage of perfect scores.

E. H. Outler tendered his resignation as a member of the executive committee and G. W. Bennett was elected to fill the vacancy. The report of the general manager showed that the results of the Chicago show had been eminently satisfactory, the attendance having been considerably larger than last year.

The show committee reported that it has received through the general manager a

petition signed by the Chicago Automobile Trade Association requesting that an earlier date be chosen for the next Chicago show. The matter was referred back to the show committee with full power to act. A lengthy report was presented by the legislative committee, setting forth the work that has been done at Albany to prevent adverse legislation, and at Washington in the introduction of the federal automobile bill, designed to relieve automobilists from the annoyance and trouble arising from the many and varied state measures. The association's counsel, Charles Thaddeus Terry, is also acting as chairman of the legislative committee of the A. A. A., thus insuring perfect unanimity of action between the two bodies. Mr. Bennett was appointed a member of the legislative, contest and auditing committees in place of Mr. Outler, resigned.

#### FROM PEKIN TO PARIS

Paris, Feb. 22—The Pekin-Paris event continues to attract a deal of attention and the opinion has been freely expressed that the distance of nearly 9,000 miles would perhaps not be so much of an obstacle to the success of the race as the difficulties of routes to be chosen—call them anything but roads—since in places only the map shows the route to be followed. A meeting of the people entering cars was yesterday held at the Matin office, with the late French minister to China in the chair. A trip through the Gobi desert was practically decided upon as preferable to following the Trans-Siberian railway. The start will not be later than June 10 next. No entry money is to be asked for, but competitors will be asked to pay \$400 to the Automobile Club of France, which sum will be returned to the persons aboard the car at Pekin, insuring no fake entries. The Paris correspondent of Motor Age will undertake further inquiries in respect to this tour for any American maker desirous of entering a car, and will enter those wishing to take part. The sum of \$400 should accompany the entry.

#### NEW STATE BODY FORMED

Minneapolis, Minn., March 4—The Minnesota State Automobile Association, comprising the club of Minneapolis, St. Paul, Duluth and Mankato, was organized this week in St. Paul to take immediate steps toward the securing of proper motor legislation in Minnesota. In the organization meeting, which was presided over by Mayor McCullum, of Duluth, plans were outlined for extensive good roads work, and for a general campaign to advance motor interests in the northwest. The association will send a legislative committee and a large delegation before the legislature next week for a hearing on the bills now pending in committee. The officers of the association are: President, Frank M. Joyce, Minneapolis; vice-president, George M. Palmer, Mankato; secretary-treasurer, H. S. Johnson, St. Paul.



NH Van Sicklen, Manager

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## ENGLISH AND AMERICAN WAYS

**N**ATURALLY enough English ways are different from American ways; perhaps, also, the Englishman thinks his way better than that of the American—and vice versa. There are some things the Englishman does, however, that ought to appeal to the average person—American or other. In all the controversies over six and four-cylinder motors and their respective qualifications as power plants for motor cars, the English arguments have been backed up by strong published reports of actual tests, so that whatever statements have been made have been found near the truth. The Englishman argues and backs up his argument; he discusses a topic and endeavors through argument to find out all that can be found out relative to the matter under discussion. This has been particularly true in the discussions over four and six-cylinder motors, whereas the average American—regardless of the side upon which he happens to be—has made statements but has not backed them. There is too much room for argument these days to take any off-hand statement as the whole truth, and besides there are too many opportunities to demonstrate the statements, particularly concerning such things as motor car power plants. A good, live debate between the advocates of four and six-cylinder motors, backed up by absolute figures taken from tests, would be worth all the bald and bold statements that could be put forth.

## OPPOSITION DISSIPATED

**O**PPPOSITION to the routes for the 1907 Glidden tour as suggested by Motor Age has been so remote as to warrant the assertion that motorists generally and the trade in particular are in total accord with the idea that the tour ought to begin in New York and finish in Chicago and pass through the important manufacturing centers of the country. When Motor Age presented the several routes for the consideration of the touring committee it supposed that, naturally, the committee would consider all and eventually select the one best suited for the purposes of the tour not only as a tour but as a contest to decide who should be the holder of the trophy. While the committee has made no selection and has given no hint as to what route will be selected, Motor Age is assured that the best interests of all will be considered and that the route that will best serve all purposes will be selected. It is apparent that the New York-Chicago route is the one that seems to hit the trade interests most

favorably, for Motor Age is in receipt of letters from all sections commending this route and stating that it is the logical one for the tour if trade interests are to be taken into consideration in the matter. What little opposition existed to the New York-Chicago route has been dissipated to a large extent through the influence of the trade interests, so that as the matter now stands the committee can safely start the tour in New York and have it end in Chicago and still cause little unfavorable comment from any source. The committee will, however, have something of a task on its hands to provide rules that will be fair to all interested and at the same time give the cup to somebody on a basis of having won it without a tie. It will require much thought, many suggestions, and a good deal of publicity and some pruning to make a set of rules that will pass inspection without a superabundance of grumbling and criticism.

## CONCERNED ACTION NECESSARY

**A**MERICA is the one country in the world that adheres strictly to the principle of states' rights in certain and now well defined matters that affect the liberties of the people, and in all probability there are few who care to see any material change in this order. But there is a tendency to promulgate a national divorce law and interstate commerce has been taken under the wing of the federal government simply because it is a matter that cannot be handled consistently by the several states of the union and at the same time give the people and the transportation lines the protection to which they are entitled. Motoring—for commercial and for pleasure—has become of such an international nature, as to suggest that the federal government has as much right to regulate it as it has to regulate interstate traffic in the commercial world. It would be almost an impossible task to compile a table showing the variations in the state, county and municipal laws relating to the government of the motor car on the highways, but while there is a great difference in the extremes of motoring laws there is not only a happy medium but a pretty well defined average that is more or less satisfactory to the authorities and to the motorists. There ought to be no great amount of difficulty in securing at least uniform rules and regulations in the various states if it is found that it is among the impossibilities to secure some form of federal regulation that will override local and state regulation. This cannot be done without the earnest support of all motorists and all motoring organizations, wheth-

er local or national in character, and it cannot be secured without a lot of earnest and consistent work, with well defined and reasonable regulations as the object to be obtained. Motoring has grown so wonderfully within the past few years that federal, state and local authorities should and probably would be only too willing to join hands in an effort to secure well defined regulations that will fit all sections.

## MORE ROADS NEEDED

**P**UNCLE SAM has only recently taken much notice of the motor car, but now he is after all sorts of information. The federal government through the congressional committee on expenditures in the department of agriculture has been looking up the matter of roads with a view of fixing the appropriation for the department of highways. The committee heard a great deal about the bad roads of the country and how they needed improving; it also heard that there are many miles of good roads and that they are suffering because motor cars destroy them. If there were more good roads—in the cities and in the country—so that traffic might be divided, the roads would wear out in proportion to the traffic and all the expense would not fall on those communities which take enough interest in their own welfare to provide decent highways. The solution of the problem now, however, is to provide roads that will withstand the motor car—the means of highway traffic of the future. It will be cheaper in the end to recognize the fact that all roads must be built for motor car use as well as for other uses.

## EARLY DELIVERIES AGAIN

**E**XPERIENCES of the past ought to teach manufacturers of motor cars and accessories the benefits to be derived from an ability to make early deliveries, not only so the mid-winter purchaser may have the full season's enjoyment of his car but in order to clear the way for another year's output and to give the parts manufacturers an opportunity to properly turn out their share of the work that enters into the construction of a car. A few makers have already gained several months and are in the happy state of being able to make and finish a season's deliveries well before most car users have taken to motoring for the season. Any maker can, by a little effort, chop off a month at a time until finally he has put himself on equal footing with his early neighbor, and the maker who hopes to be a strong factor in the trade of the future will find this policy the correct one to which to adhere rigidly.





## CURRENT COMMENT



**B**OSTON'S show may be known technically as a local show, but the only reason for terming it such is the fact that the New York and Chicago affairs are over and Boston's exhibition comes along toward the tail-end of the procession of local shows. As a matter of fact it will outstrip either of the New York shows or the Chicago show in point of size, number of exhibitors and number of cars. It may not come up to New York in attendance—yet, if last year's record is to be maintained, it will clean up all shows in this respect, for last year the crowd was so great the police were compelled to close the doors on a mad throng endeavoring to gain admittance. All this does not favor much of the "local," and so Boston has a decided right to be classed with the others as national affairs.

**G**OOD old horses are a long way from down and out as a result of the motor car; as a matter of fact the motor car, instead of destroying the horse market, simply saved it, according to eastern figures, so that the farmer and the horse breeder ought to feel rather kindly to the motor vehicle. According to the figures found in the agricultural department at Washington the horse stock of the country

had increased about 50 per cent—from 15,624,000 to 23,564,000—in the 7 years since motor vehicles came into general use, and prices of horses advanced more than 112 per cent. Notwithstanding an unprecedented gain of 8,000,000 in the number of horses and mules, the demand for horses increased still more rapidly and so exceeded the supply that the average price of horses on the farms rose from \$44.50 in 1900 to \$94.50 in 1907, the highest ever recorded since the government began to take account of live stock values. Prices have jumped \$24 per head—about 35 per cent—in the last 2 years in the face of an increase of 3,617,000 in the number of horses and mules. This is still further shown in an interview with a prominent veterinary in attendance upon a veterinary association meeting in Kansas City lately. Dr. Anderson believes the motor car has not only helped to raise the prices on horses but has been beneficial to the equine and its owner in many other ways, so that there is not so much cussing due the motorist as may have been supposed.

**T**OURING is to be more seriously considered than it ever was before by the American Automobile Association, if the decision of the touring board at Buffalo last week is to be carried out. The A. A. A. has for years had any number of committees, all with splendid objects in view, but the trouble has been the members thereof, excepting those on the racing board, found too much else to do to bother with A. A. A. work and as a result there was little accomplished. There are now, however, good prospects that something will be accomplished by some of the committees beside the racing board and the touring board seems to be one promising something. It will not be enough for the A. A. A. to run the Glidden tour—there is much other important work for the committees that are branches of the touring board and it is up to these committees to do more than their predecessors have done.

**M**ISSOURI legislators are about to pass a new motor car measure, one that, while not all that motorists could wish and which has some severe portions, is so far ahead of anything the Missouri motorists have had that they can accept this in lieu of something better, when there is less antagonism to the motor car than there is at the present time. The new bill does away with individual county licenses, which has been the one stumbling block for motoring in Missouri, and in this re-

spect it is an improvement over the old law. But it provides for a maximum speed of but 15 miles an hour, which is ridiculous, even for city traffic. It provides that the motorist must stop on signal of a driver of a horse and also when the motorist has been the cause of an accident. This makes compulsory only what any decent man will do, wherefore the decent man needn't complain and the others need the law.

**P**OSSIBLY the proposed federal law for the registering of motor vehicles will be of some benefit to tourists and to those who happen to live near state borders and who wish to cross over for short trips into another state, but outside of these points it cannot be of any great amount of use. It will not give much of an idea to the statistician, for those living in the interior of the states will not pay registration fees unless they can see some good in return. What is needed is a federal law that will do away with the conflicting state laws and that will put one motorist on a par with another, no matter in what state he lives or in what state he happens to be at any time. It may be this law will so conflict with state rights as to be impossible—but it would be the ideal thing, nevertheless.

## THE WEEK IN BRIEF

Chairman Hower and members of touring board of A. A. A. meet in Buffalo; board is divided into committees and campaign mapped out; no decision arrived at regarding Glidden tour route.

Terry bill, a national motor measure drafted by American Automobile Association, is presented to house of representatives and is referred to judiciary committee.

Joseph F. Gunther elected president of Chicago Automobile Trade Association, which goes on record as favoring show in December instead of February.

C. J. Glidden, in interview, declares he favors A. A. A. tour starting in New York and finishing in Chicago; condemns southern roads.

Touring board of Automobile Club of America secures valuable information from C. J. Glidden regarding roads of the world.

Indiana motor car manufacturers look for relief in shippers' bill which has passed house of representatives.

Congressional committee receives valuable information concerning highways from director of public roads.

Eighteen cars are entered in 9,000-mile tour from Pekin, China, to Paris, France; American entries invited.

Two more shows open, one in Minneapolis and the other in Kansas City; both of them successful.

Missourians considering motor bill which has been substituted for measure fathered by the clubs.

N. A. A. M. votes against competitive tours, but favors club team competitions.

## COMING MOTOR EVENTS

March 9-16—Fifth annual show of Boston Automobile Dealers' Association, in Mechanics' hall and Horticultural hall. Chester I. Campbell, 5 Park square, Boston, manager.

March 13-16—Omaha's second annual show. March 18-23—Show at Providence, R. I., in Infantry hall.

March 20-27—Nice, automobile week.

March 21, 22, 23—Toledo show, to be held in Coliseum.

March 21-30—New Haven industrial exposition and motor car show, in state armory, New Haven, Conn.

April 2-15—Monaco meeting.

April 1-6—St. Louis Automobile Dealers' Association, show at St. Louis in Jai Alai building.

April 6-13—Montreal, Canada, second international motor car and sportsman's exhibition. R. M. Jaffray, manager, 309 West Notre Dame street.

April 8-13—Pittsburg Automobile Dealers' Association show at Pittsburg in Duquesne garden.

April 18-20—Targa Florio, in Sicily.

April 25-28—Touring competition, under auspices of the Automobile Club of Turin.

April 28—Chauteau Thierry hill climb.

May 1-15—Paris-Madrid touring competition to Madrid exhibition.

May 18-21—Auto-Cycle Club of France, Paris-Ostend-Paris.

May 24-27—Automobile Club of Austria, voiturette contest.

May 15-31—Automobile Club Seine and Oise, wheel competition.

May 15-31—Automobile Club of the North, industrial vehicle competition.

## TERRY'S BILL IS FILED

### National Motor Car Measure Introduced Into House of Representatives by New Yorker

Washington, D. C., March 1—The bill providing for the regulation, identification and registration of motor vehicles engaged in interstate travel, drawn by the American Automobile Association, was introduced in the house of representatives on February 27 by Representative Cocks, of New York. It was referred to the judiciary committee for action. As the bill was introduced during the last week of the present session of congress, it will not be acted on, but will go over until the first session of the sixtieth congress, which begins in December next. In the meantime motorists throughout the country can work up sentiment in favor of the bill, and can present a solid front when congress gets ready to take up the measure next December.

Chairman Charles Thaddeus Terry, of the legislative board of the American Automobile Association, prepared the bill after a careful investigation of the decisions of the supreme court and the recent enactments of congress bearing on interstate commerce. Chief Justice Marshall many years ago held that commerce included intercourse and travel, and the decisions of the court since have not varied from his view. It is now popularly conceded that railroads operating in more than one state may be regulated by the federal government. The same principle permits similar regulation of motor cars by the same central power. The bill does not, however, attempt to regulate the use of such vehicles save in the matter of registration and numbering, and affects only vehicles which are duly registered under the laws of the state where their owners live and which are about to be used by such owners in other states. The main features of the bill may be put into three groups:

Exemption from registration provisions of state laws other than the laws of the state of the owner's residence. Thus: On compliance with the provisions of the act with reference to previous registration in the state of the residence of the applicant, and on filing with the bureau created by the act of a verified application, which application shall state among other things the name and residence of the applicant, his state registration number, a description of the vehicle, the manufacturer's number, the character of the motor power and the amount of such power stated in figures of horsepower, such bureau shall issue to the applicant a certificate of registration and a federal number. Thereafter in traveling anywhere in the United States outside of the state of the owner's residence, such owner shall, by displaying the federal number on the front and rear of his motor vehicle, be

exempt from the laws of other states regulating registration and the carrying of numbers.

The identification number or sign.—The provisions of the act require that while the vehicle is in a foreign state, such number shall always be displayed both in front and in rear; the number to be 3 inches high, with the initial letter or abbreviated designation of the state where the vehicle was originally registered at the left of such number and the initials of the United States at the right of such number. It is thought that if the bill becomes a law, a motorist desiring to travel in foreign states will have his state number on one side of a reversible number pad and his federal number on the opposite side of such pad, thus permitting them to change from the state to the federal method.

The motor vehicle bureau.—The act will create in the department of commerce and labor a bureau in charge of a commissioner with a secretary and clerical assistant. To such bureau will be sent all applications, and in it will be kept records of the vehicles registered, indexed for ready reference and the supplying of information on all proper requisitions for the same. Salaries are provided for the commissioner, secretary and clerical force payable out of the fund created by the registration fees. Such fee will be \$5 in the case of an individual and \$10 in the case of a manufacturer. Penalties.—The act provides for the lodging of complaints with the bureau by any person or corporation, for the investigation of complaints and the infliction of punishments, the latter consisting chiefly in a suspension or loss of the privileges of federal registration. Considering the great advantages to motor vehicle users of federal registration, such a penalty, that is, the suspension or forfeiture of the right to federal registration, is thought sufficiently severe.

It will be seen that the benefits conferred by the act upon the non-motoring public, in facilitating the performance of their duties by peace officers, in supplying quick and ready means of identification in case a non-resident motorist violates the laws of the state through which he may be traveling, together with obviating present confusion resulting from the multiplicity of number signs carried by motor vehicles now necessarily registered under varying state laws, are many and important.

### PRACTICAL DEMONSTRATIONS

Denver, Colo., March 2—For a week daily demonstrations have been given the members of the Denver police force to acquaint them with the speed of motor cars. Squads of officers line up at the city hall and the city driver puts the city's touring car through various degrees of speed, while the officers hold their watches. Through the business part of the city 6 miles an hour is the limit; outside of this radius it is 8 miles.

## TALK ON PUBLIC ROADS

### Congressmen Given Useful Information Concerning Highways and Their Construction

Washington, D. C., March 4—The congressional committee on expenditures in the department of agriculture has just concluded a series of hearings, one of the witnesses being Logan W. Page, director of office of public roads. Mr. Page gave the committee detailed information about the working of his office, and among other things said:

"One of the most difficult problems which road builders have to meet now is due to the greatly-increased motor car traffic on the roads. It is affecting most the states that have spent the most money on their roads because they have the greatest number of motor cars on them. With an ideally constructed stone road you have just enough wear, or, in other words, the qualities of the rock should be so adjusted to the traffic to which it is subjected that just enough fine dust is worn off to cement the larger fragments of stone together. Now, the motor car does not wear off any fine dust. The wind and rain are taking away the original binder, and that derived from the iron-tired vehicles that go over it; that is washed off and blown off, and the motor car loosens the surface of the road. These heavy machines going at high speed create a vacuum behind them which sucks up the dust and throws it into the air and loosens the roadbed and it soon ravel, as the road builder calls it—gets loose and goes to pieces—and it is the most expensive roads that are affected most in that way. We must get some means for meeting this problem, and we are making experiments with every known material that we think will accomplish the desired end—good roads."

Chairman Littlefield wanted to know what Director Page considered the most economical road, taking into account the cost of building and the expense of repair and the durability, the telford, the macadam or the good dirt road. Director Page replied "unquestionably, at the present time, if the community can afford it, the macadam road is by far the best and the most economical in the long run, provided it is not subjected to travel by too many motor cars. We have got to treat the surface with some material that will keep the dust down if there are many motor cars going over it."

He further stated that some oils will do this. The oils which have asphaltum base as high as 30 per cent or over do very well if they are properly used, and the office of public roads is groping away to try to improve the method of using it. The office is using crude tar and is also using calcium chloride, which is hygroscopic and absorbs water from the air and keeps the road damp. Experiments also are being made



in the laboratory with some of the metallic resins. In fact, the office is trying everything which is reasonably cheap and which will be practicable.

Continuing, Director Page said: "The interest that is being taken everywhere for the betterment of roads is very great indeed. You can get an idea of the amount of money that is spent, and what an important problem it is, and how important the betterment of roads is, from this: We have almost completed a census of the mileage of roads in every county in the United States, the number of miles of roads improved with stone or gravel, the method of raising the tax, by statute labor or money tax, and the rate of the tax levy. We find approximately about 2,300,000 miles of road, with an expenditure of about \$75,000,000 annually. This is entirely outside of municipalities, and includes only rural, common roads, of which about \$15,000,000, or 20 per cent, is expended on permanent improvements. By that I mean improvements which make the road better the next year than it was the year before; and this high percentage is due to the fact that states like the New England states and New York, New Jersey and Pennsylvania bring that average up, I should say, at least 100 per cent, because they are making very large expenditures on their public roads."

#### NEW EASTERN CLUB

New York, March 4—A new club is in process of organization in New York. It has been incorporated and bears the title, the City and Country Motor Club. It is a proprietary organization. The promoters of the club aim at a membership of 5,000, of which the first thousand will be exempt from the payment of an initiation fee. It is planned to establish one city and two country club houses. Three sites have been suggested for the latter, from which two will be chosen: On Long island, not less than 15 miles from the East river; New York state, not less than 15 miles from the Harlem river, and upon the south shore of Staten island. Prominent among the incorporators are Dr. Edgar T. Weed, James Stewart Blackton, A. J. Cobe, J. Edward Roskam, Maurice Untermyer, Magistrate Frederick B. House, Percy G. Williams, State Senator William H. Reynolds, R. B. Covert, Johnson Quinn and W. Woods.

#### ANOTHER ALCOHOL TEST

Chicago, March 4—B. C. Hamilton and Louis J. Sackett, of Chicago, recently took part in an alcohol test, using a 35-horsepower Isotta Fraschini limousine car. They used the selfsame carburetor which is used for gasoline. When the engine was first started and while cold it sputtered and missed but did not stop running, although its operation was not satisfactory until it was warmed up. It was found that with alcohol the motor could be throttled very low—in fact, down to a very few revolutions a minute.

### CUP DONOR ON ROUTE

#### C. J. Glidden Favors Starting the 1907 Tour in New York and Finishing It in Chicago

Boston, Mass., March 4—"Chicago certainly deserves some recognition and it is time it shared in a Glidden tour as one of its principal cities." That was the statement Charles J. Glidden, the donor of the trophy for which many cars compete each year, made to the Motor Age representative today in discussing this year's tour.

"Not long ago I was conferring with some of the officials of the A. A. A. on motor matters and the subject of the next tour naturally came up," said Mr. Glidden. "Of course as donor of the trophy I was not presenting my views with a view of having them prevail, yet I had to make some comment, and in return I sought some inkling of what was in mind. As I had toured over some of the southern roads, and that quite recently, I am of the opinion that it would not be wise to try and send the tour in that direction this year at least. The roads are very poor. Remember that I am speaking as an individual solely, yet having had the experience of traveling thousands of miles on all sorts and conditions of roads I think I am qualified to make some suggestions.

"Then again I have accompanied the tourists each year, and I know what it means to send sixty or seventy cars filled with people on a long journey. It would make an ideal trip to go west from New York and end at Chicago. I should like to see the trip made that way. Being a New Englander, I would like to have the run cut in across Massachusetts, say to Springfield. It is not far then to Lenox. The Aspinwall, at the latter place, would make an admirable stopping place over night, and it was one of the few places on our first year's run where we found ideal conditions. From there I would shoot across to New York state in a northerly direction and go by way of Saratoga to some of the lakes in New York state, say Schroeon lake, or Placid, or Champlain. There would be lots of room at either place. Then continue north to the Thousand Islands and take in Ottawa. It would be a nice trip down the St. Lawrence westerly, and would finish the tour of a year ago.

"At Kingston the tourists could return to New York state and visit Buffalo and Niagara Falls on the way west. Then Detroit, and if need be Cleveland, and finish at Chicago. That would give an opportunity to take in both the big cities and the summer resorts. The tourists do not want to stay in the cities over night all the time when there are places in the country that can accommodate them. If Chicago were made the starting point, then the route could be reversed. You see the trip has been made directly across New York state once and that was enough. Should the tour go in a

southerly direction, by way of Pennsylvania, and end in the east, I think it should not terminate at New York, but continue on through New England to Bretton Woods. The first trip took the travelers to the mountains and so did the second one, and those who made both tours remember well that really the best part of their journeys was through the New England states. Roads were fine and the accommodations were distinctly good, the people were hospitable and there were no grafting hotel keepers in those states. Undoubtedly I shall be on the trip again this year. In April I shall sail for Europe and take along my car. The accident to it in Mexico recently knocked me out of my schedule for this winter so I shall try England and Scotland. I have done very little touring in the latter country and I want to make the run from Land's End to John O'Groat, the two extremes of Great Britain. So I shall spend several weeks on the other side and then ship my car to the continent to await my arrival in the late fall. Meanwhile I shall return to be with the Gliddenites for a third time. Tell the Motor Age readers that I have tasted Chicago hospitality and have found it unexcelled, and would like nothing better than to enjoy it again this summer."

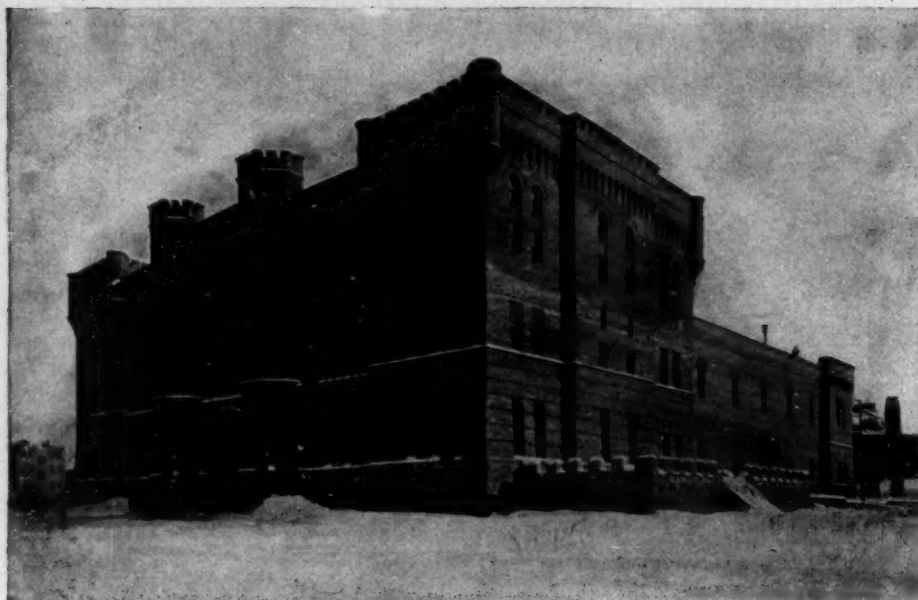
#### GOOD ROADS LESSON

Cleveland, O., March 3—Secretary Asa Goddard, of the Cleveland Automobile Club, now feels assured that sufficient money will be raised to carry out the club's project of building a section of model highway on the main road east of Cleveland. Motorists of not only Cleveland but surrounding cities have chipped in quite liberally towards the worthy project, while the farmers and property owners along the proposed route have evidenced a substantial monetary interest in the project. This stretch of turnpike will follow the construction of the ancient Roman roads, which are still models of excellence in many parts of Europe. The foundation will be 2½ feet of rock with 8 inches of gravel or chipped stone on top of this. The idea is to secure a perfect foundation, and then if the money holds out the best kind of gravel surface will be given to the road. In case the club runs short of funds the foundation will be right and the surface can be improved a little later. The stretch selected for the improvement, lying between Euclid and Willoughby, is said to be actually the worst piece of road on the main highway generally covered in traveling from New York to Chicago.

#### WOULD TAX CARS

Seattle, Wash., March 1—A tax on cars of from \$25 to \$100 is the proposition that is being considered by the county commissioners as a means for maintaining good roads in Washington. The legislature will be asked to pass a law providing for such a tax similar to that in force in eastern states and which are well liked here.

## NORTHWEST'S FIRST SHOW A LARGE ONE



ARMORY WHERE MINNEAPOLIS SHOW IS BEING HELD

**M**INNEAPOLIS, MINN., March 3—The first annual northwestern show opened in the Minneapolis National Guard armory yesterday to crowds which taxed the utmost capacity of the big building. The doors were thrown open early in the afternoon and several thousand interested visitors inspected the cars during the afternoon. The formal opening took place at 8 o'clock in the evening, when the show was officially dedicated by Governor John A. Johnson and Mayor Haynes. Crowds poured into the building before the lights flashed the formal opening of the show and by 8 o'clock the building was packed.

For a time it was found necessary to close the doors and hold the crowd back until the pressure could be relieved. The thousands of visitors packed every available foot of space in the aisles, flowed over into the spaces between the cars and made it almost impossible for the man bent on investigation of cars to get anywhere through the throng.

The balcony was a solid mass of people all the evening, the attractive program of the Symphony orchestra causing the crowds to move slowly through the aisle spaces. Between 12,000 and 15,000 people passed through the armory aisles on the opening day and helped to express the approval of the northwest of the efforts of the Minneapolis show managers.

The exhibition is in every way an entire success. It exceeds the fondest hopes of the dealers, and is a surprise and revelation to the thousands of people who have been looking forward for years to the advent of the Minneapolis show. The Chicago show decorations form the basis for the decorations, and are said to be more attractive and satisfactory in the armory than they were in the Coliseum. The heavy stucco and plaster friezes have been

erected at the edge of the balcony, completely surrounding the drill floor. No overhead signs are permitted, the signs being placed as they were at Chicago. The width of the balcony makes the exhibition spaces beneath the balcony as wide and light and roomy as are those on the main floor.

On the opening day 109 cars, representing forty-six makers and twenty-three exhibitors were in place in the building. The show is characterized by few local productions, the Wolfe being the only home product in the car line, and the Index speed indicator a widely-known accessory of local manufacture. The cars cover the entire range of American makes, however, and are shown in all models and designs. As at other shows, the presence of the high-powered roadsters has been especially striking. The big runabouts are shown by almost all makers of standard cars, including the Olds, Packard, Thomas, Stoddard-Dayton, Buick, Moline, Orient, Frayer-Miller, Queen, Franklin, Wolfe and others. There is an excellent display of chassis on the floor, at least fifteen stripped frames being shown. Several of these are mounted from the floor, and operated by electric motors, though there is no general application of power to the operation of models.

A careful census of the cars on the floor on the opening night, made by Motor Age, showed eighty-nine gasoline models, fifteen electrics and five steam cars. The show has been a constant surprise to the thousands of visitors who have inspected it. Praise for the managers who conceived it, worked out the plans and superintended the work of decoration and preparation is universal. The show has been built up within a comparatively short time, and the energy directed toward its inauguration

has been remarkable. The original plans were worked out by L. H. Fawkes and W. H. Wheeler, who started the ball rolling and later attended to the work of securing the exhibition hall and opening the plans for space.

Harry E. Pence, Harry E. Wilcox and J. J. Barclay have made up the executive committee which has worked out the show and made it what it is. It was due to the push and daring of these three dealers that the elaborate scheme of decoration and the advertising campaign were undertaken. The results appear to justify their daring. The show will become a permanent feature of the northwest, and the present exhibition has been advertised in every town and hamlet within several hundred miles' radius of the twin cities. The active management of the show is in the hands of Walter Wilmot, a baseball manager of national reputation, and it has started its huge machinery as smoothly as the best adjusted car within its confines. The arrangements made for the accommodation of visitors and for the general comfort of the motorists and their friends are the most complete that have ever been offered in connection with a western show, and the manager and executive committee are highly complimented on every hand.

The women's rest room, which is in fact one of the company rooms of the armory, has been fitted up with nearly \$10,000 worth of rare Turkish and other oriental rugs, imported tapestries and special furniture. This room was decorated by Boutell Brothers, of Minneapolis, and contains many of the best pieces from the big Boutell establishment. The men's smoking and lounging room, provided by the Minneapolis Automobile Club, has been similarly fitted up by the New England Furniture Co. and also is strikingly beautiful and sumptuous. There is also a cafe, a complete system of interior telephone communication, provided by the Northwestern Telephone Co., and other features of convenience. The Vanderbilt cup race pictures are shown in a special room on the balcony floor.

The hall is brilliant with lights at night. The roof is entirely concealed by a sky of purple and gold, under the edge of which hang the big oil paintings from the Chicago show. The purple and gold decorations have been carried out in the decoration of the balcony, and wherever bunting or special decoration have been needed. Thousands of lights serve to make the hall brilliant at night. Eight strings of incandescents run from the center of the hall to the corners and sides. Great American flags are draped on the sides and in the corners; and the general effect is one of the most harmonious schemes possible. From without, a great 20-foot pathway has been opened through the heavy fall of snow, from Hennepin avenue to the door



of the armory, and over this hangs a continuous line of incandescent lights. The clubhouse of the Minneapolis Automobile Club is in Hennepin avenue, and the club rooms have been thronged with visitors since the opening of the show. From the top of the Plaza hotel a great searchlight flashes down Hennepin avenue and up to the armory entrance. The show has complete accessory exhibits from many houses. There are no tire exhibits, with the exception of the tire rebuilding demonstrations. Motor cycles are shown by two concerns and launches by two. The prospects are for a week of great business activity. Sales will be heavy in the northwest this year and it is expected that hundreds of orders will be closed during show week.

On the main floor of the armory, which is 145 by 160 feet, there are 104 cars and chassis, representing forty-four manufacturers and twenty-one exhibitors. Two exhibitors, showing two makes of cars, have been crowded into balcony spaces. One car of local manufacture, the Wolfe, made by the H. E. Wilcox Motor Car Co., of Minneapolis, is shown for the first time at the Minneapolis show. The Wolfe exhibit is located just to the right of the main entrance to the armory floor. Four cars are displayed—two touring cars, a runabout and a chassis, all of 24 horsepower. The feature of the Wolfe, which was fully described in a recent issue of *Motor Age*, is the exceptionally high clearance, 16 inches. To country visitors to the show this has made the Wolfe especially attractive. The runabout is shown with a back constructed so that an extra casing, or a considerable quantity of luggage, can be carried in it. The chassis of the Wolfe is mounted on jacks and driven by an electric motor, and the gear casing and other parts are removed so that the operation of the transmission can be plainly seen.

The two largest individual exhibits on the floor are those of the Pence Automobile Co. and F. G. Winston, Jr. The Pence exhibit contains Buicks, Packards, Pierce Arrows, Autocars, Stevens-Duryeas, Babcock electrics and an Orient buckboard engine. The two-cylinder Buick is shown in chassis and in touring car; the four-cylinder in touring car and runabout. The four-cylinder Packard is shown in runabout and racing runabout. A four-cylinder Pierce, Autocar runabout and four-cylinder touring cars, Stevens-Duryea touring car, limousine and Big Six, a Stevens chassis and a Babcock stanhope make up the exhibit.

In the Winston exhibit are an Oldsmobile runabout and touring car, 40 horsepower; Columbia touring car; Orient touring car and Orient runabout; Woods electrics in a brougham, two victoria phaetons, coupe, stanhope and an unfinished model, and the Columbia electric in landaulet and victoria. The Winston exhibit displays the electric to the best possible advantage.

A. C. Bennett shows Wintons, model M and model XIV; G. W. Caplin has three

Royals, a touring car, limousine and regular chassis. The Winton and Royal exhibits adjoin. Walter G. Benz has a Jackson touring car, 24 horsepower, a chassis of the same, a Jackson shaft-drive car, Moline runabout and Moline touring car. The Barclay Automobile Co.'s exhibit, just to the left of the main entrance, contains some of the most attractive cars of the show. The Thomas Flyer, Thomas Forty and Thomas Forty runabout are exhibited, together with a chassis of the Flyer. Stanley steamers, both runabout and touring car, are also shown. In the Frayer-Miller exhibit, displayed by W. C. Thornhill, is the Vanderbilt cup racer. The Frayer-Miller also is shown in the 25-horsepower stock runabout and the seven-passenger touring car.

The Haynes Automobile Co. and the Jordan Automobile Co. have two choice exhibits of standard cars. In the Haynes exhibit the White steamer is king, being shown in the new model G Pullman and the model H five-passenger car. The latter car was forwarded for the Minneapolis show by express and did not reach the armory in time for the opening night. In the Haynes exhibit are also four Stoddard-Daytons—a limousine, a 40-horsepower touring car, a 40-horsepower roadster and an 18-horsepower runabout. The Jordan exhibit contains Locomobile, Peerless, Franklin and Corbin models. The Locomobile is shown in the landaulet, seven-passenger touring car and 20-horsepower touring car; the Franklin in the runabout and touring car; the Peerless in the stock four-cylinder touring car, and the Corbin in the 24-horsepower touring model. A Franklin engine also is shown.

The Northwestern Automobile Co. displays Reos and Fords. The Baby Reo occupies a pedestal in the front of the exhibit and attracts considerable attention. The six-cylinder Ford touring car, the four-cylinder runabout and a chassis of the lat-

ter complete the Ford exhibit, while the Reo is shown in the touring and runabout models.

An exhibit of Cadillacs by the Northwestern Cadillac Co. contains five cars in three models—model K victoria with and without a top and a chassis of the same; model G touring car, 20 horsepower, and model H touring car, 30 horsepower. Waverley electrics are also exhibited by this agency, the models being the victoria phaeton, runabout and chelsea coupe.

The Aerocar Co., of Minneapolis, shows both air-cooled and water-cooled models of the Aerocar. The air-cooled is the 24-horsepower model, and the water-cooled is shown in the 40-45. Mitchells, Waynes and Jewels are shown by the Evans Motor Car Co., the first two in the four-cylinder touring car models, and the Jewel in the stock runabout. Maxwells are shown by A. F. Chase & Co. Model R L runabout and a chassis of the same and model H B touring car make up the exhibit. The Auto Selling and Repair Co. has the St. Louis, in the stock touring model, and the Deere touring car. The Marvel, also handled by this firm, did not arrive for the opening of the show.

Queen cars, in runabout and two touring models, all 30 horsepower, are exhibited by the East Side Auto Co. Haynes cars are shown by Maxfield & Rice Brothers. The Haynes model T, 50 horsepower, and model S, 30 horsepower, make up the exhibit.

The only service truck on the floor is contained in the Fawkes Automobile Co.'s exhibit, which is a particularly complete one. This is a Detrick stock truck. The Fawkes exhibit contains the full line of Ramblers in runabout, chassis of same, two-cylinder touring car and two models of the four-cylinder. The six-cylinder National and four-cylinder National and the Holman are also exhibited.

The single electric exhibit on the floor is that of the Columbus Buggy Co., show-



GLIMPSE AT A SECTION OF THE MINNEAPOLIS SHOW

ing the Columbus electric in victoria phaeton, chassis of same and the inside-driven coupe. Two exhibits of cars were forced into the balcony—the Cartercar and Mora. Neither was ready for the opening night. The Cartercar is shown by the Cartercar company and the Mora by the Twin City Motor Co.

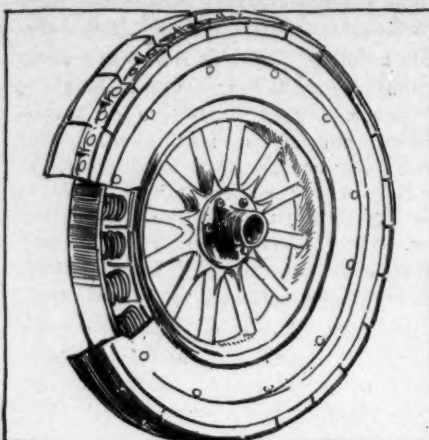
One of the most attractive exhibits on the main floor is that of the Wallis Coach and Carriage Co., showing built-to-order limousine and regular bodies. The company has a 1906 stock Stearns, rebuilt into a limousine, with all the latest improvements. A 1905 White steamer, the body of which has been rebuilt with side doors and the wheelbase lengthened 15 inches, also is shown. Portions of a special body, forgings, springs, leathers, cloths, windshields and all other accessories to coach work are shown.

The balcony accessory exhibits are tastefully arranged and cover the whole range of parts, equipment and repairs. The Index speed indicator, manufactured in Minneapolis by the Oliver Instrument Co., is shown by the Pence Automobile Co. in a balcony space. This exhibit contains also Prestolite tanks and other accessories.

The Fawkes Automobile Co.'s balcony space has one of the most complete accessory exhibits in the building. It contains all standard lines of parts, horns, lamps, tops, tire covers, chains and sundries.

The Beckley-Ralston Co., Chicago, exhibits through E. A. Williams, Minneapolis agent. A particularly full line of tools is shown, together with Hendee brushes and standard sundries. The Tokheim Mfg. Co., Cedar Rapids, Ia., shows the Tokheim gasoline outfits. A most attractive oil display on the balcony is that of the Penn Oil and Supply Co., showing the Silver Leaf motor oils, in the various grades. The oils are forced up through illuminated tubes. The company shows its own Zenith Auto soap and displays also Western gasoline storage outfits. The Evans electric vulcanizer is shown by the Evans Motor Car Co., of Minneapolis, manufacturer of the device. The vulcanizer is also shown in the Fawkes exhibit and in other balcony booths. The Evans company shows also the Springfield speedometer and other motor car sundries.

The Royal rim is displayed somewhat pretentiously and is attracting attention not only from individuals but from the trade men in attendance at the show. Twenty-four short spiral springs are arranged over the rim, which is on the felloe of the wheel, and are retained in place on the plain side by means of small lugs or projections. The basic principle of the rim, as given by the inventor, is "the reeling down under compression, with twenty-one layers of textile fabric of a tensile strength of 60,000 pounds or over, thus subjecting the springs to a compression intended to equal the weight of the motor car." The fabric is over the springs and the latter are retained in position on



ROYAL RIM IN PART SECTION

the fabric side against driving movement by means of blocks. The tire proper—of either solid rubber or metal—is attached to the fabric strip. Side plates are attached to the felloe to prevent lateral movement of the springs and to eliminate dust. It is claimed for the springs that even if two should break their absence would not be detected and that it is only the work of a moment to replace a spring.

Ignition material is shown by the Northern Electric Co., which displays the Pittsfield coils and timers, Columbia dry cells, National coils, Holley and Schebler carbureters and other lines of which it is a jobber. The Hollis Electric Co. also shows ignition apparatus. Vesta batteries and lamps, Connecticut coils and meters and Lindsay distributors are included in its display. The Minneapolis General Electric Co. shows electric heating apparatus and special applications of electricity, practically none bearing on motor car equipment. The Gugler Electric Co. displays sparking apparatus, coils and batteries. The Auto Parts and Equipment Co., of Chicago, shows Vivax storage and ignition batteries. The Barclay Automobile Co. has a full line of sundries. The Sorg-Bader Co., of Minneapolis, has Swinehart tires and a line of specialties. The Northwestern Cadillac Co. shows Solar lamps, Prestolite tanks and other sundries.

A novelty in robes is the muff robe, shown by the Laramee-Grahn Co. The

robe has muff attachments on the outside, the tonneau robe being equipped with three muffs. Robes are shown in leather, plush and waterproof cloths. The Invincible Tire Armor Co., Hartley, Ia., shows the Invincible armor. The Louglin-Brugger Co., Fond du Lac, Wis., displays tops and trimmings. C. J. Smith & Co., St. Paul, has a full line of accessories and supplies, as jobbers of all accessories. A novelty of the show is the emergency wood tire manufactured by the Half-Nelson Tire Co., Minneapolis. The tire is in six wood sections reinforced with iron, and can be taken to pieces and stowed away in the tool box, ready for emergency use. It can be applied quickly and will enable the car to run in without injury to rim or differential, it is claimed.

There are no tire exhibits except those of tire rebuilding concerns. The O. Fenstermacher Co. shows retreaded and rebuilt tires which attract considerable attention. Tires are shown in various processes of repair. The application of Bailey treads and the repair of blow-outs by an improved process of weaving in new fabric are shown. Weed chains are shown in abundance.

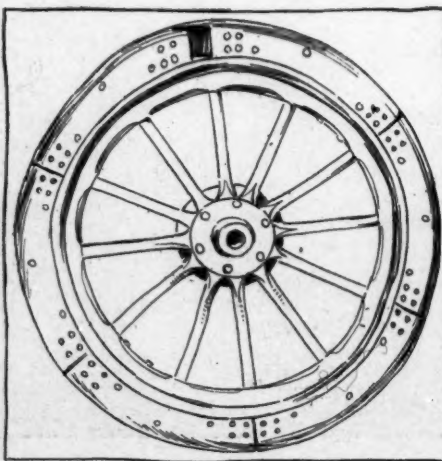
A Diamond-Goodrich tire, built up from one-half of each, is shown by the National Tire Repair Co., of St. Paul. The company shows some effective examples of the rebuilding of tires by its process, and the repairing of blow-outs and rim cuts. The J. N. Johnson Co. also shows tire rebuilding and repairing.

Motor cycles are exhibited by Frederick Roach, who displays the Yale-California, and by Guy W. Webb, who shows the Harley-Davidson.

There are two launch exhibits—the Shadegg Engine Co., with the Lacey marine engine, motor boat, motor canoe and a stock canoe model and the Red Wing launch in the booth of the Twin City Motor Co., which handles the Mora cars. Although the motor boat has such a small representation the people take a lively interest in these exhibits.

#### BOSTON'S BIG SHOW

Boston, Mass., March 4—So great has been the demand for space at the fifth annual motor car and power boat show, which will be held March 9-16, that Manager Chester I. Campbell has been compelled to remove several rows of seats from the balcony. Every available foot of space in Mechanics' building has been taken and Horticultural hall is overflowing. Boston will set a new record at this show, not only in the number of exhibitors but also in the number of cars shown. Statistics prepared by Manager Campbell call attention to the magnitude of his exhibition. Three hundred and forty-two exhibitors will occupy space and 423 cars will be shown, figures far in excess of the New York, Chicago and London shows. Manager Campbell gives out the following figures on the number of exhibitors: A.



HALF-NELSON EMERGENCY TIRE



C. A. show, New York, 230; A. L. A. M. show, New York, 249; Chicago show, 270; London show, 290; Boston show, 342. In the way of makes of cars shown his statistics show: A. C. A., 85; A. L. A. M., 45; Chicago, 96; Boston, 121. Number of cars: A. C. A., 251; A. L. A. M., 238; Chicago, 359; Boston, 423.

Next Saturday night the Boston show will throw open its doors to the general public and, judging from the enthusiasm that it has aroused, there will be a tremendous attendance all through the week. Boston is going to try the experiment of an increased price, following the lead of New York and Chicago. On next Wednesday night the general admission will be \$1 instead of 50 cents. Manager Campbell has been working like a Trojan to get things in shape and all this week he has had a large force of men hustling in both Mechanics' and Horticultural halls. The latter is nearer the main hall than Symphony and it will be better adapted for the show annex this year. For the first time in its history Paul Revere hall, the swell dance hall of the Back Bay, that is located in Mechanics' building, will be used for exhibition purposes. In other years the show association has tried to get it, but in

vain, and this year the request for it was turned down. Colonel A. A. Pope, however, managed to secure it for his company because he is a director of the association that owns Mechanics' building. The Pope company did not have a space secured because of a change in the agency here, so it seemed as if it were out in the cold. A few days ago the announcement was made that Paul Revere hall was secured, and it was doubted. It will afford the Pope company a fine chance to display all its cars. The space will be larger than any other in the building, for it has the entire hall. The decorations for the show were being put in place rapidly during the week and there will be no hitch when the doors are thrown open. A year ago the crowd was so big on opening night that the police had to close the doors and there was danger of a crush that would injure a lot of people. This was looked after Saturday night to prevent a repetition of such an occurrence.

#### PITTSBURG HUSTLING

Pittsburg, Pa., March 3—Preparations for the show already are under way and carpenters, sign painters, decorators and others are preparing the material which

will transform Duquesne Garden into an entirely different place in the 55 hours between the time possession of the building is turned over to the association and the hour when the committee will arrive with the distinguished visitors who will formally open the show. One item alone which will give some idea of the magnitude of the show is the contract for 25,000 square feet of green denim which will cover the main floor. The space on the main floor will be given over entirely to pleasure vehicles and the list which will be shown will include most of the high grade cars on the market.

#### TOLEDO DATES SET

Toledo, O., March 2—The marked success of both the Detroit and Cleveland shows aroused a great deal of enthusiasm in Toledo and a show here is assured. The dates have been set for March 21, 22 and 23. The exhibit will be made in the Coliseum, a building 100 by 200 feet. Contracts now are being signed for floor space. The committee believes it will be possible to put on a show for 3 days that will stir up enthusiasm among the motorists of Toledo, who have been hungering for such an exhibition since the circuit started.

## KANSAS CITY USING GARDEN DECORATIONS

Kansas City, Mo., March 4—The first attempt to hold a motor car show in this city has all the ear marks of being a success. The formal opening took place this evening in Convention hall and the way the people turned out convinced the promoters that a motor car show is just what has been wanted in Kansas City. A visitor who attended the opening of the northwest show in Minneapolis, where the Chicago decorations are being used, thought he had struck another national show when he entered the doors of Convention hall, for Chicago's rival is reproduced here, only on a smaller scale. There are the same Swiss guards in all the finery, just as they appeared in Madison Square garden and on the oval walls the Alpine scenery stands out prominently. It's a Swiss winter in Missouri, but no one seems to mind it any. Down the middle of the hall is the same old arbor, while the Madison Square statuary stands around, apparently as much at home here as in Gotham. The men who put up the decorations declare they look better here than they did in the garden, despite the fact Convention hall is oval in shape, while the garden is square. The Kansas Cityans are delighted with the results and this show will go down in history as a success. The attendance the first night was very gratifying and it is expected it will get better as the show progresses.

All the well-known makes of cars handled by Kansas City dealers are on view in the show, as well as two new machines. One of them is the Mason, which, while

not made here, is looked on as local, for the output is handled by a Kansas City concern. The Mason is a two-cylinder car, with a horizontal motor set longitudinally under the seat and is fitted with planetary transmission. The other is the Kansas City truck and by the way it is the only one at the

show. Only a chassis of it is on exhibition. It is a 3-ton affair with such features as a two-jet carburetor and control entirely by the throttle. It had been intended to exhibit the truck at Chicago, but for some reason it did not get there, so it is brand new here. Designer Dietrich has followed modern practice in constructing the rig, the frame being 175 inches long, 48 inches wide at the rear and the forward third narrowed to 36 inches to give wheel clearance in turning. The wheelbase is 120 inches and the length over all 180 inches. The motor is vertical and water-cooled and the cylinders cast in pairs, the bore and stroke being  $4\frac{1}{4}$  by  $5\frac{1}{2}$  inches.

One can make the rounds of the show and see all types of cars, running down from the six-cylinder to the one-cylinder. The Ford and the Stevens-Duryea are represented in the six-cylinder group, while the White is the only steamer on the floor. Only one electric is on view.

Not the least important part of the show is the accessory exhibit. It seems that everything imaginable in the line of motor-supplies can be found in this department and the sight-seers take as much interest in them apparently as they do out among the cars.

One of the novelties on exhibition is a miniature car designed and made by Henry Rampel, a 14-year-old school boy living at 3037 Olive street. It is patterned after a touring car built to carry six people and is run by a dry battery. The boy turned out the little car without any help during his leisure hours.

#### EXHIBITORS AT KANSAS CITY

Kansas City Motor Car Co.—Truck  
Mason Car Sales Co.—Mason  
Forest City Motor Car Co.—Jewel  
Ferguson Implement Co.—Gale and  
Glide  
Buick Automobile Co.—Buick  
W. S. Hathaway Automobile Co.—  
Thomas  
Ford Motor Co.—Ford  
C. H. Blomstrom Motor Car Co.—Queen  
De Luxe Motor Car Co.—De Luxe  
Palace Auto Co.—Oldsmobile, Columbia,  
Pierce, Knox trucks  
E. P. Moriarty & Co.—Packard, Peer-  
less, Stevens-Duryea  
Pope-Toledo Motor Car Co.—Pope-To-  
ledo, Pope-Hartford, Pope-Waverley  
Missouri Valley Automobile Co.—White  
Ettwein Motor Car Co.—Welch, Stod-  
dard-Dayton  
W. R. Demster Machinery Co.—Max-  
well  
Cadillac Automobile Co.—Cadillac  
Bonney Motor Car Co.—Franklin  
Holcker & Elberg Carriage and Rubber  
Co.—Bodies, tops, glass fronts  
Kansas City Auto Supply Co.  
Herz & Co.  
Warner Instrument Co.  
Jones Dry Goods Co.—Clothing  
Kansas Rubber Co.  
Standard Speedometer Co.  
A. C. Smith Specialty Co.  
Auto Supply Co.—Sundries  
Fidelity Oil Co.  
Inter-State Oil Co.



## THE READERS' CLEARING HOUSE



### TIMING A MOTOR

Davenport, Ia.—Editor Motor Age—Will you please state in the Readers' Clearing House columns the best procedure to time valves. I have a double opposed motor  $4\frac{1}{2}$  by 4 inches. In cylinder No. 1 the exhaust valve opens 3 1-16 inches before center and closes on center; the intake opens  $4\frac{1}{2}$  inches past center and closes  $9\frac{1}{4}$  inches past center, the piston traveling  $\frac{5}{8}$  inch back into cylinder before the valve closes. These measurements are taken on the rim of a 20-inch flywheel. In cylinder No. 2 the exhaust opens on the center and closes 2 inches before the center—this can be remedied by stretching valve stem, as the space between is about 3-32 inch. The intake opens 4 inches after the center and closes  $11\frac{1}{2}$  inches after the center, the piston traveling 1 inch into the cylinder before the intake closes. The exhaust is about correct, as the manufacturer says the time on the valves on this engine should be as follows: Inlet opens  $4\frac{1}{2}$  inches after center, inlet closes  $7\frac{1}{2}$  inches after center; exhaust opens 3 1-16 inches before center, exhaust closes on center. All cams are on one camshaft. How can the valves be timed according to manufacturer's instructions?—F. A. Davenport.

The inquirer does not state whether the engine cams are in one piece with the camshaft or are fastened on, as by keys or pins, and he does not state whether the rise and fall profiles are tangent or undercut. If the cams are removable the best plan may be to take the motor to a good machine shop and have new inlet cams made, and possibly a new exhaust cam for cylinder No. 2. However, if the inlet cams are held by pins it may be possible to take out the old pins, relocate the cams and drill the cams and shaft in fresh places for new pins. This can be done if the new holes do not have to be so close to the old ones as to weaken the shaft. If the cams are held by keys it may be possible to relocate the cams by cutting out the keyways a little and using wider keys. If, in the judgment of the machinist who does the job, these expedients can be resorted to without danger of weakening the shaft or cams, the best plan will be to make new cams and use the old holes in the shaft to pin or key them.

### ONE OF THREE THINGS

Bismarck, N. D.—Editor Motor Age—I undertook a job to put a three-cylinder air-cooled car in running order for a party here. The motor never gave power enough to drive the car as it should and it always overheated. After the car had been run 20 or 30 minutes it would not have power enough to use high speed. I put on one new cylinder and all new piston rings; also

adjusted exhaust valves so that they start to open when within  $\frac{1}{2}$  inch of the end of the explosion stroke and close just past the dead center at the other end of the stroke. The intake valves are automatic. The motor has plenty of power when I start and for about 15 or 20 minutes; then it loses power. The longer I run it the less power it gets. After I stop and let the motor cool for half an hour it has power again. The motor does not get so hot as it did before I fixed it. Can you give any reason, through the Readers' Clearing House, why this motor loses its power.—F. Jaskowiak.

Apparently the trouble is due to one of three things. The carbureter is giving too rich a mixture; one or two of the cylinders are not doing their duty, owing to leakage or to the valve spring tensions—inlet or exhaust—being incorrect; or, the trouble is due simply to the fact that the exhaust valves do not pass the burned gases as freely as they should. The inlet valve springs should have a tension when the valve is closed of about 1 pound for every ounce of the valve's weight, and the exhaust valve springs should be stiff enough to make the valves follow the cams at all speeds of the engine. The inlet valve should open from 3-32 to  $\frac{1}{8}$  inch, according to the size of the engine. If attention to the above particulars does not correct the trouble it is probable that the exhaust valves open too late and close too early. They should open when the crank is between 36 and 40 degrees from its bottom position. This will be equivalent to from 1-10 to 1-9 of the circumference of the flywheel, and it can easily be laid out on the flywheel rim with a tape measure. The valve should close when the crank is about 10 to 15 degrees past its top center, or from 1-36 to 1-24 of the flywheel's circumference. For proper valve sizes and lift see Motor Age for February 21.

### REBABBITTING BEARINGS

Chicago, Ill.—Editor Motor Age—I wish to rebabbitt solid bearings for a crankshaft. If I set the shaft or end, pour the metal around the shaft and tamp it tight with an iron from the end, will it make a durable bearing? I have no machine with which to work and wish to do it myself.—Subscriber.

One cannot expect to compress babbitt by hammering to a depth of more than about  $\frac{1}{4}$  to  $\frac{1}{2}$  inch from the surface. Consequently the process suggested would have no effect on the babbitt except near the end. If it did have an effect it would be to loosen it from the bronze bushing, which is scarcely what is desired. Moreover, it would be certain to throw the shaft badly out of line.

### ADJUSTING A CARBURETER

Lacota, Mich.—Editor Motor Age—I have a Kingston carbureter on an Orient buckboard that is entirely out of adjustment, including proper level of float, etc. Will you kindly advise me how I shall proceed to properly adjust the same; what parts I shall move first, etc.?—Ralph B. Deal.

The writer does not state which type of Kingston carbureter he has, and the procedure to be followed will depend entirely on this. If he has the old type A, without an automatic air valve, the proper plan is to start with the throttle nearly closed and adjust the needle valve on top to give the best running under this condition. When this has been accomplished the mixture will be approximately correct for high speed, provided the carbureter is the right size for the engine and the spray nozzle and needle valve are not clogged. If the carbureter is too large for the engine it will be necessary to restrict the air inlet somewhat, and this will be a matter for experiment. Whatever type of carbureter, the first step should be to bring the float to the proper height to close the float valve when the gasoline level is just below the spray nozzle. If the float is saturated with gasoline it should be taken out and put in a warm place for a number of hours to dry it, and should then be very thoroughly shellaced. To shift the float up or down on its stem will be a job for a man with a soldering iron, and should be very carefully done. The gasoline level can be determined by taking out the valve and the needle valve. If the carbureter is one of the types with an automatic air valve, the throttle should be opened wide and the needle valve governing the spray nozzle adjusted first with the motor running light, a little faster than its maximum road speed. The throttle should then be nearly closed and the spring controlling the automatic air valve should be adjusted till the motor runs steadily with the minimum throttle opening. If the motor does not pull properly when the car is tried on the road, further slight adjustments of the needle valve or the automatic air valve may be tried. If the spring governing the automatic air valve is much too weak or too stiff, a new spring may be necessary. See the article on adjusting carbureter in Motor Age for November 1, 1906.

### NO DATE AND NO ROUTE

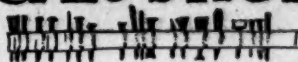
Springfield, O.—Editor Motor Age—What date has been set for the start of the Glidden tour? Also, what is the official route?—C. B. B.

No route has been selected, as told in this week's issue; and the date has not been announced.





# MOTOR CAR SHOP KINKS



## EFFECT OF SPIRAL OIL GROOVE

It is easy when pouring babbitt in a bearing to form a spiral oil groove with as many turns as desired by simply winding a string or piece of wire around the mandrel. This of course does not apply when the mandrel is considerably smaller than the shaft, and the babbitt metal is condensed by pening, as described in Shop Kinks a few weeks ago. It can be done, however, when the bearing is simply counterbored enough to clean it, provided the wire used in the mandrel is large enough to leave a half-round groove after boring. A bearing whose oil groove forms a continuous spiral like this will cause the oil to flow in one direction or the other, according to the rotation of the shaft, and consequently the fresh oil should be introduced at one end of the oil groove, and proper provision should be made for receiving the oil escaping at the other end and returning it to a suitable oil pocket below, or to the crankcase if the main bearing of an engine is in question. So strong is the tendency of the shaft to cause the oil to travel through a groove of this sort that the step bearing of a vertical shaft can very easily be lubricated in this way by providing an oil well around the bottom of the shaft with the end of the oil groove connecting with it and an overflow and return for the oil at the top of the bearing. This keeps the oil in constant circulation.

## LUBRICATING UNIVERSAL JOINTS

An unprotected universal joint in the propeller shaft needs oiling very frequently, and in many old cars these joints are unprovided with a special oiling arrangement. So long as the joint is left exposed probably the best expedient is to wipe it clean and flood it with fairly thin oil in the hope of a portion of the oil finding its way where it will do some good. A better plan, however, is to have a casing made of flexible leather a little larger than the joint, and to fill this with very soft Albany grease and bind its ends to the shaft with soft brass or copper wire. If the grease is too stiff, it will not find its way to the bearing surfaces, but if it is very thin it will do so without difficulty.

## USE OF COPPER SHIMS

Some car builders provide copper shims between the pedestal and cap of all their bearings in order to make it easy to take up wear by simply taking out one or two pairs of shims. This is well enough in its way, but the amateur is apt to forget that a good deal besides taking up the shims is necessary in order to make the bearing a fit. For example, the shaft is likely to be worn out of round by the constant recurrence of maximum loads on one side. Again, owing to springing of the shaft or the connecting

rod, as the case may be, the bearing may be worn more at one end than the other. This is particularly true of offset crankpin bearings, but it is also true of the main bearings if they have worn unequally till the shaft can spring. In every such case the shaft must be trued and the bearings scraped to fit before the car can run any distance without the bearings again becoming loose. A bearing taken up in the makeshift way just mentioned may run loose in a day or so, whereas if the job were done properly it would last a season.

## EASING A STIFF BEARING

The usual and correct way to ease a bearing a little too tight on its shaft is to scrape it, but sometimes this may be inconvenient. In that case the following expedient has been found useful: The shaft is carefully draw-filed over the whole bearing surface, using a dead smooth file and being very careful to file equally at all points. The file is moved parallel with the shaft, and a very slight amount of filing should be enough. The theory of the thing appears to be that, in addition to slightly reducing the diameter of the shaft, this causes the microscopic globules of oil to be caught by the fine ridges made by the file and thereby forcibly carried around. Of course if the oil supply failed and the shaft were to touch its bearing, it would at once begin to cut. It may be mentioned that ridges made circularly around the shaft, as by filing the shaft in the lathe, do not have the same effect; and this is one reason why, when a shaft is finished by polishing with emery, the job must be finished with emery so fine as to give practically a dead smooth polish.

## GOOD SHOP REMEDIES

A simple way to treat the cracks that sometimes appear on one's knuckles in cold weather is to pare down the skin with a sharp knife on both sides of the crack so that the paring of the skin will not be confined to the crack itself. The crack should then be covered with some disinfecting salve and wrapped loosely to protect it. It will generally heal within 2 days. Salva-cea is useful for any kind of a small wound which penetrates so deeply that it cannot be cleaned by the ordinary home devices. Such wounds have a tendency to heal over on the surface while still festering inside, and the effect of Salva-cea is to keep the wound open on the surface while protecting and sterilizing it beneath so that it heals properly from the bottom up. Small cuts and abrasions should be washed clean before dirt gets in them, either with bichloride of mercury or listerine, and as soon as they stop bleeding they can be covered with New-Skin. It is very necessary that the wound be thor-

oughly disinfected before the New-Skin is applied, otherwise it will fester underneath, and New-Skin is troublesome to remove before it wears off naturally. If the cut bleeds it must be washed with clean water till the bleeding stops and then with listerine and the surface dried before applying New-Skin. A cut can often be closed without stitching by pressing the edges together and applying a plaster formed of clean absorbent cotton saturated with New-Skin. It will heal in about 3 days. Of course the foregoing does not apply in case a blood vessel has been cut, in which case a surgeon should be consulted. In case a wound treated as above itches or is painful the following day, it is because it has not been properly cleaned.

## SYMPTOM SOMETIMES MISTAKEN

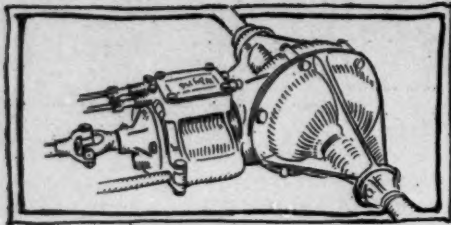
Dripping gasoline in the intake of a carbureter, just after the engine has stopped, is sometimes taken to mean that the carbureter floods, when in reality it represents simply the least volatile portion of the gasoline, which is condensed on the inner surface of the pipe between the carbureter and the engine and runs back when the suction ceases. Of course, if the drip continues long, it indicates either that the float in the carbureter is too high or that the valve itself leaks. If the gasoline drips from some chance opening between the carbureter and the engine when the latter is running slowly, and ceases to drip when the engine is speeded up, it is probably due to the sluggish evaporation of part of the gasoline, and it drips at low speeds simply because the suction is not sufficient to prevent it from running down. In case the engine pulls well at both high and low speeds, it is unnecessary to assume that the carbureter is giving too rich a mixture at low speeds.

## LIMBERING STIFF TIRE CASINGS

An expedient recommended to facilitate the putting on of stiff tire shoes in cold weather is to warm the shoes, which may be done by putting them near a radiator or by pouring boiling water over the treads. If water is used it should not be allowed to touch the fabric. By warming the shoes they are rendered somewhat more pliable and less liable to crack when the levers are used.

## GOVERNMENT BRONZE

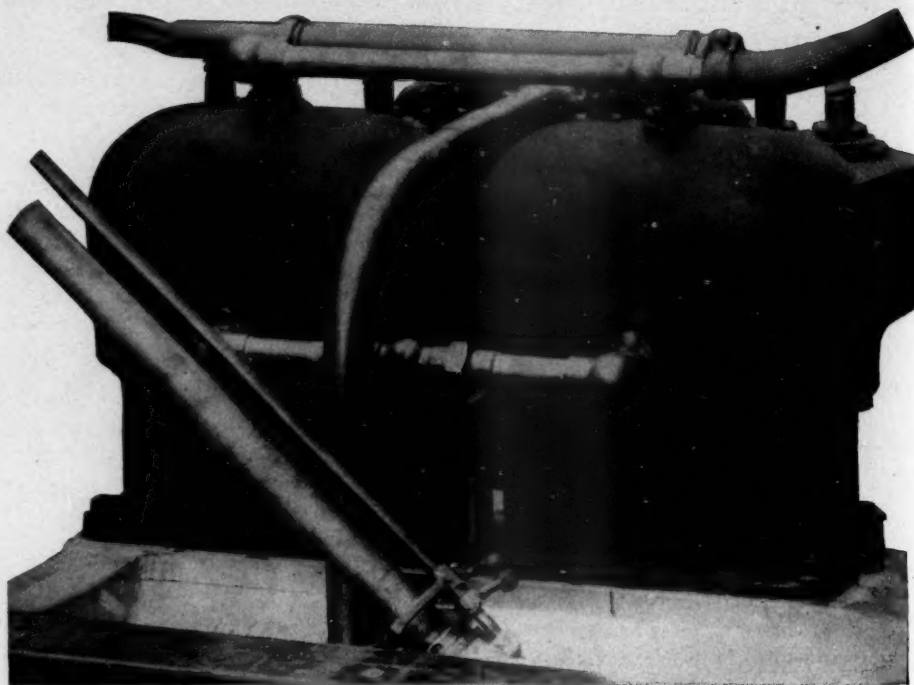
The so-called "government bronze" used in the United States navy is supposed to have the proportions eighty-eight parts of copper, ten of tin and two of zinc. Castings made exactly to this formula are not only tough, but very hard and difficult to machine. It is said that by the addition of a little lead the metal may be made to work more easily without proportionate loss of tensile strength or toughness.



**B**ESIDES continuing a couple of its last year models the Wayne Automobile Co., Detroit, Mich., has put on this year's market a new model, officially known as N, in which many new details in Wayne principles are incorporated. As an opening broadside in this innovation trend is the locating of the selective gearset immediately in front of the rear axle and forming the gearbox integrally with the differential housing. Although new with the Wayne people, this design has been exploited for a great many seasons by a few American builders, and this year a perceptible landslide toward it forms one of the tendencies of the season. Following this Wayne improvement wave is the use of a motor with valves carried on the one side instead of opposite valves. Also there is an expanding clutch, a substitute for the cone design associated with the company's plans in the past. Such are the landmarks of change, and to these milestones could be added a double system of rear hub brakes. This model N enumeration could be continued, but particular reference will be given to several changes later. Generally speaking, model N is a five-passenger vehicle manufactured with a wheel-base measuring 106 inches in length, fitted with a 35-horsepower motor with cylinders having  $4\frac{5}{8}$ -inch bore and  $5\frac{1}{4}$ -inch stroke, and having 34-inch front and rear wheels with  $3\frac{1}{2}$  and 4-inch pneumatics respectively. The car is built complete to tip the scales at 2,400 pounds, meaning, of course, with full equipment.

The new model N motor is conventional throughout and follows those lines seen in such cars as Oldsmobile, Thomas Forty, Diamond K and others in which such structural points as cylinders cast in pairs with valves on the left side; integral water-jackets, cylinder heads and valve ports;

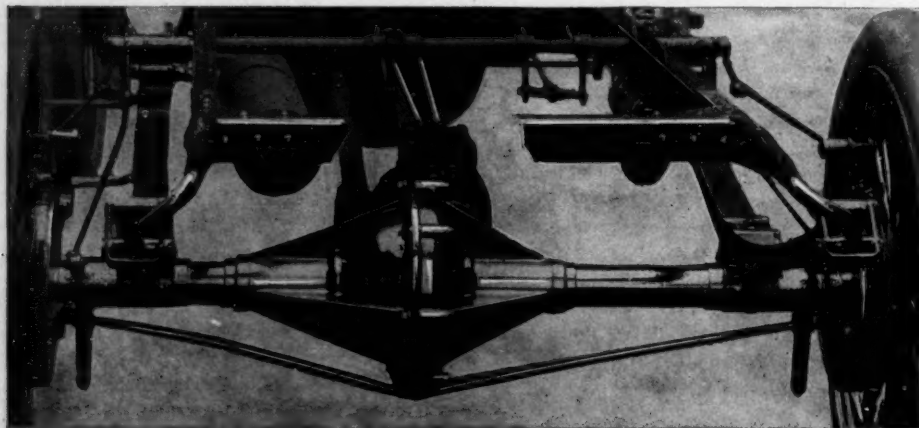
## MOTOR CAR DEVELOPMENT



RIGHT SIDE WAYNE MODEL N FOUR-CYLINDER MOTOR

two-piece aluminum case with crankshaft and camshaft carried on the upper half and the lower half formed into a couple of oil pits, one for each cylinder pair, are most prominent. Incorporated in the many motor parts are the following peculiarities of construction: Long flanged wrought steel valve stem guides pressed into the openings in the base of the valve ports; four eccentric piston rings; solid steel wrist pins 1 inch in diameter, hardened and ground and fixed into the ends of the connecting rods by tilt-screws with retaining wires; valves made with nickel steel heads and machine steel stems electrically welded together; separate cams secured to the camshaft by Woodruff key and pins; connecting rods, steel drop forgings, marine type, and  $11\frac{1}{2}$  inches from center to center; and crankshaft of machine steel ground to a finish and made with bearings

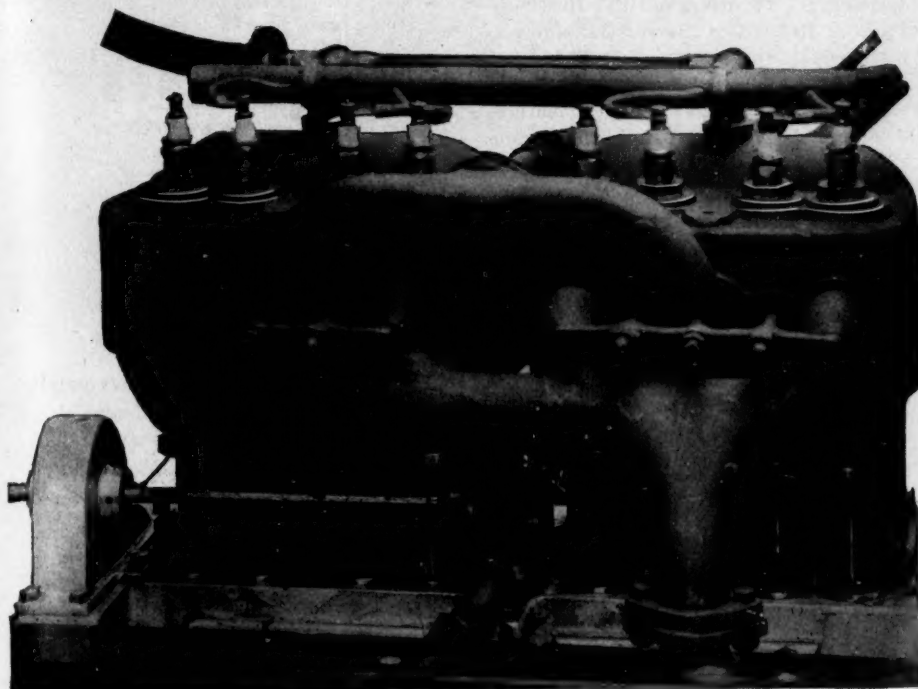
and crankpin bearings  $1\frac{3}{8}$  inch in diameter. Parsons white bronze not only forms the bearing surface for the three bearings of the crankshaft but is also used in the lower ends of the connecting rods. The intake and exhaust piping is a two-manifold style—a one-piece exhaust casting with four branches and the main pipe opposite the rear cylinder pair and the intake is an inverted Y, the stem of which curves over to the right side of the motor between the cylinder pairs and descending on the right side carries a Holley carburetor well down on the crankcase side. A three-stud yoke retains intake and exhaust manifolds to each cylinder pair. The disposition of the several motor accessories includes a separate shaft on the left for driving the water pump carried opposite the opening between the cylinder pairs on the left. The shaft is driven by gear from the camshaft and enclosing the gear is a semi-cylindrical cap forming a bearing for the gear as well, and resting on the forward end of the half-time gear housing, so that the splash lubrication is made use of. Water circulation is conventional and assisting it in cooling is a four-blade fan mounted on brackets from the radiator top and driven by wire belt. The tubular radiator contains 125 vertical tubes  $\frac{1}{4}$  inch in diameter and divided into five rows twenty-five to the row. These tubes connect between upper and lower water tanks and to assist the radiation of heat 120 copper plates are fitted so the tubes pass through them. In motor lubrication oil flow is entrusted to a five-feed



WAYNE MODEL N, WITH GEARBOX IN FRONT OF DIFFERENTIAL



# WAYNE IN NEW STYLE

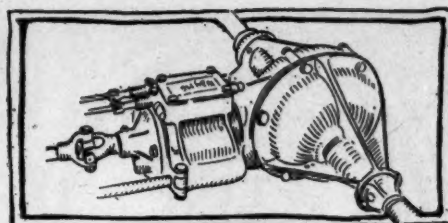


VALVE AND MANIFOLD SIDE OF WAYNE MODEL N MOTOR

Detroit lubricator carried on the right front motor arm and belt driven. Three leads pass to the crankshaft bearings, the remaining two to the crankcase pits. Ignition is by jump spark methods with double set of plugs, one set in the caps above the intake valves and the other in the caps over the exhaust valves.

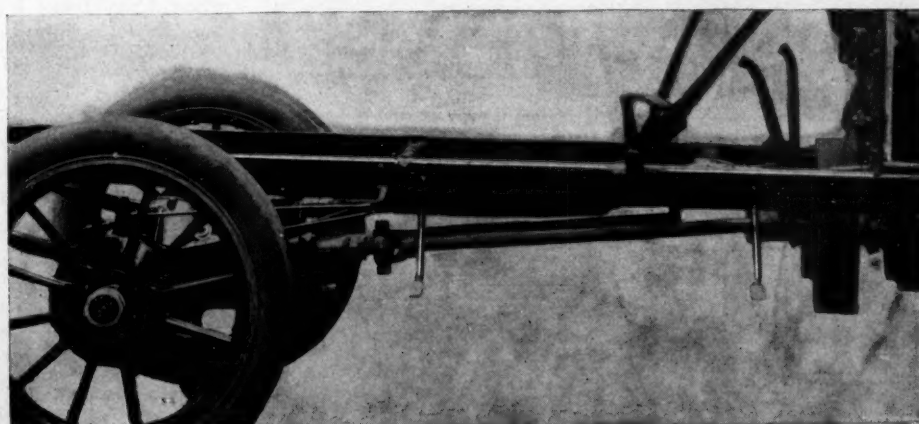
Carrying the gearbox on the back axle necessitates a long propeller shaft made from 1¼-inch steel stock and made 36¼ inches long. A feature made in connection with the shaft is the little angularity required which the company claims is but 2½ degrees at the most and nothing with a normal load and the car standing. One forward and one rear universal joints are in place. The gearset's general design appears in an accompanying sketch showing it from the left front. The housing is a unit casting with the right half of the differential housing and, in short, consists of an extension and expansion of the differential housing neck for carrying the pinion shaft in the typical shaft driven car. The forward end of the box is open for the insertion of the gears and shafts and the cover plate takes the forward bearings of the main and countershafts. The gearset proper follows that conventional line in which the mainshaft is directly above the countershaft, both in a vertical plane, and in which a separate reverse shaft and gear are housed in the lower portion of the case. A plan sectional drawing showing the gearset and differential as seen from directly above is included in the illustrations and in it B

is the short forward shaft for coupling to the rear end of the propeller shaft. C is the mainshaft of the set on which operate two sliding units F and F1 both shown in black. The corresponding gears on the countershaft are indicated, as is the reverse gear. A marks the entry of the torsion rod into the housing and H and H1 indicate the care taken in webbing the case wherever possible to lend strength. Similar, in fact heavier webbings G and G1, strengthen the halves of the differential portion of the casting. This construction also can be seen in the view of the rear of the chassis. Parsons white bronze forms the bearing boxes for the entire gearset save the rear bearing of the mainshaft, which has supporting it a race of Timken rollers seen directly in front of the pinion. A plain bearing is introduced behind the pinion. Rear axle drive shafts

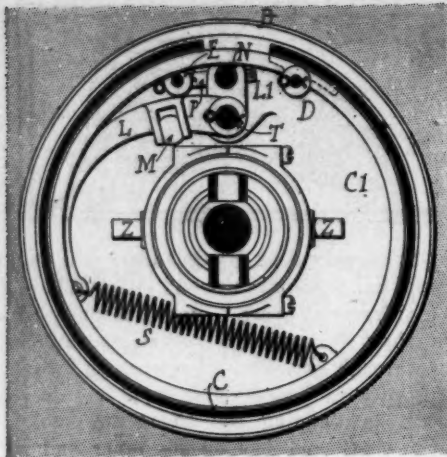


E are supported on Hyatt rollers and end thrust ball races are used at either side of the differential gears. Speed changes for the three forward and reverse variations are through one side lever working in an H quadrant. The lever is supported on a sleeve surrounding the emergency brake lever shaft and has on its inner end a short arm with T head, the cross on the head carried transversely. On the frame cross piece are pivoted two belleranks, the shorter arms horizontal and the lower arms vertical and hinged to the forward ends of the shifter rods from the gearset. The shorter arms have yoke ends to receive the cross top of the T arm so that when the change speed lever is in the outer slot of the quadrant the right half of the T cross engages with the yoke in the right hand bellerank and when in the inner slot the left half of the T head engages with the other yoke end bellerank. The shifter rods enter the top of the gearbox and carry the usual depending yokes for engagement with the sliding units F and F1 carried on the squared mainshaft.

In the first stage of the Wayne transmission, that of flexibly association the motor with the gearset, appears one of the novelties of model N—an expanding clutch with the expanding member expanded into the flywheel drum largely by the torque of the flywheel and not by a spring as is usually done. Two illustrations of this clutch are produced, one a vertical section as seen from the side and the other a view as seen from directly behind. In the side section the end of the motor crankshaft A is seen provided with a large integral flange to which the cast iron flywheel is bolted and also a continuation tail shaft A1 on which the expanding clutch part is carried. The flywheel has on its rear face a flange 10 inches in diameter and made with 3-inch face which is marked B in



WAYNE N CHASSIS WITH GEARBOX ON REAR AXLE

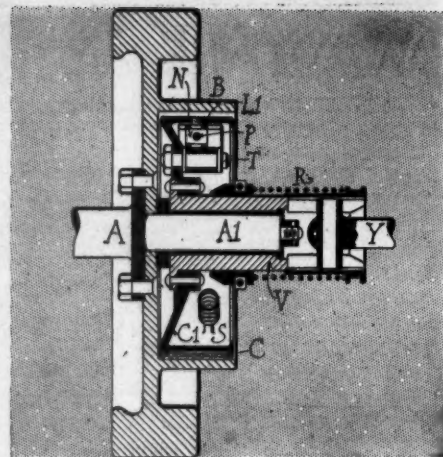


END VIEW WAYNE CLUTCH

both illustrations and it is against the inner face of this that the expanding member presses. In the end view is shown the expanding ring C, almost a complete circle shown in black, with the right end bolted at D to the ring carrier C1 and the other end loosely connected to the carrier C1 through a linkage. In engagement this circular band C has to be expanded against the flange B and which action is accomplished as follows: The free end of the expanding ring carries an eyehole E and to which is pivoted a short bolt-like member P threaded at its free end through a revoluble pin the end of which is seen at N in the end view. This pin N is carried in the short arm L1 of a bellcrank having L as its long crescent shaped arm and at T this bellcrank is carried on the clutch carrier C1. A spring S attached to the free long end of the arm L is at its opposite end attached to the carrier C1. To expand the clutch ring C its free end at E must be thrust outward, which is partially done by spring S as it pulls inwards the end of arm L, which causes the outer end of short arm L1 to move leftward thus forcing the free end of the expanding ring at E outward against the flywheel flange.

But this expanding action is assisted by the rotation of the flywheel which in the end view illustration moves leftward on top, thus forcing the free end of the expander C against the flange B for positive engagement. To disengage the clutch attention is directed to the vertical side section in which appears a spring R bearing at its forward end upon a wedge sleeve in which is held the collar with connections to the clutch pedal. The black wedge-shaped sleeve is continued forward, not shown, and formed on it is a cam face which bears upon the roller M shown carried in the crescent arm L seen in the end view of the clutch. When the pedal is released this cam piece is ahead of the roller, being forced there by the spring R, but upon depressing the pedal the cam is drawn backward and comes against the roller M, forcing it outward toward the perimeter of the flywheel, which means that the short arm of the bellcrank L1 is carried to the right and so the free end of the expanding ring C at E is carried inward and out of contact with the flange B on the flywheel, giving total disengagement. In the illustration the sectional illustration V indicates the hub sleeve to which the expanding band carrier C1 is bolted and Y the front end of the propeller shaft connecting with the gearset. In the end view ZZ mark the collar studs for connection with the arms on the pedal shaft. Clutch adjustment is by threading the bolt P more or less into the revoluble pin N carried in the short arm L1 of the bellcrank.

Three-sixteenths inch pressed steel constitutes the chassis frame, with drop forged spring eyes. No sub-frame is employed, the four lugs of the motor base being flanged to rest on top of the side frames and being retained in place by horizontal bolts. The front cross member, of channel iron, is dropped 5½ inches to support the radiator. The length from the front spring eye to the rear link eye is



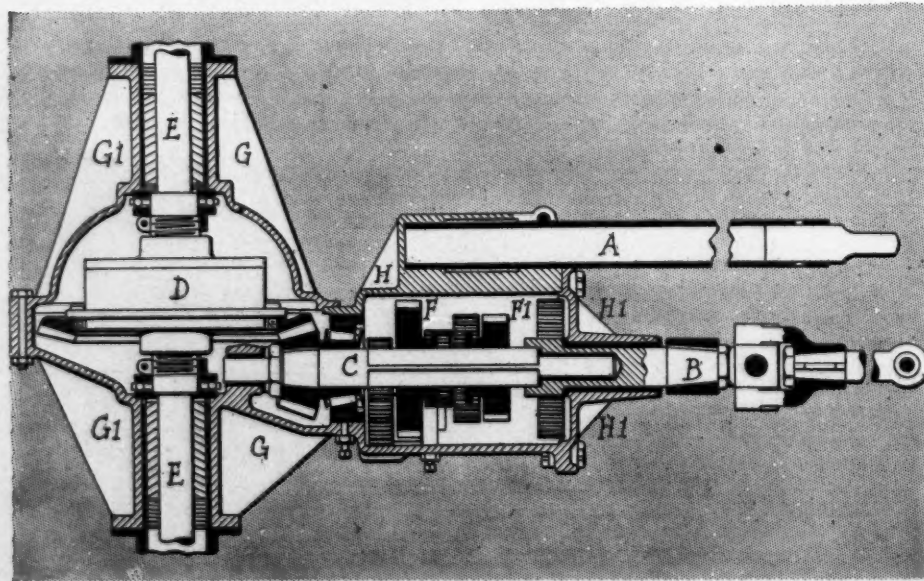
SIDE SECTION WAYNE CLUTCH

148½ inches, the width 32 inches parallel and the greatest depth of the frame side 4 inches. The front axle is a steel tubular body, 2 inches outside and 1¾ inches inside, with drop forged steel yokes and steel casting spring perches, pinned and brazed to the axle tube, which is dropped 3 inches in the middle. The knuckle pins are steel, hardened and ground. Integral steel drop forgings form the stub axles and arms, with hardened and ground pin-brushes, spring oilers in top ends and hex nut and split pin retention. The rear axle is of steel tube flanges and three pieces of aluminum casting, the flanges being pinned and brazed to the steel tube lengths and the aluminum gear casing and bevel gear housing are bolted to the steel tube flanges. The third piece of aluminum is a casting covering the front openings in the change gear box and bevel gear housing integral casting. The body of the straight line style is well upholstered and has a roomy tonneau.

Besides its model N the Wayne line includes model K, a five-passenger car carrying 35-horsepower motor with 4¾-inch bore and 5-inch stroke. The wheelbase measures 104 inches, tires are 32 by 4 inches, speed variation is by a three-speed set carried amidships, drive is by propeller shaft and the complete car weighs 2,100 pounds. This machine is practically as it was manufactured last season. The other car R is the big 50-horsepower, seven-passenger machine known last season as model F. It has undergone a few changes and has as leading specifications 117-inch wheelbase, 34 by 4½-inch tires, three-speed gearset, ball bearings throughout except in the motor and weighs 2,800 pounds.

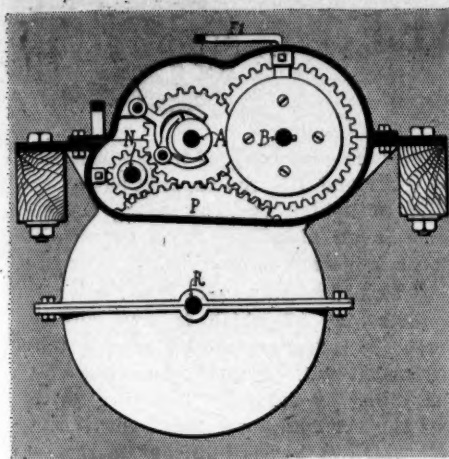
#### GEARSET WITH TRIPLE REVERSE

The introduction of the gasoline motor into railroading for propelling inspection and section gang cars as well as for the roadmaster and a dozen other uses has given vent to the cry for a transmission set affording the same number of speeds for reversing as are provided for traveling ahead, this of course to be accomplished without too great multiplicity of gears and not too indirect drive. A recent



PLAN SECTION OF WAYNE N GEARBOX AND DIFFERENTIAL





END OF TROEGER GEARSET

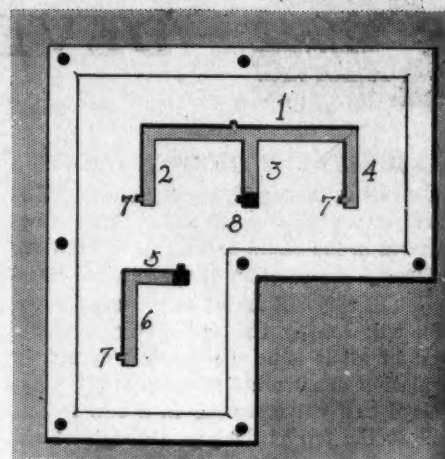
production along this line is the invention of Jesse S. Troeger, 7216 Perry avenue, Chicago, Ill., whose device affords three forward speed variations and an equal number of speed changes for reverse use. Illustrated herewith are three sections of this gearset, the larger one a plan section and two smaller views, one an end part section and the other a plan diagram of the quadrant in which the change speed lever works. Power from the gasoline motor comes through the cone clutch C and is delivered to the mainshaft A of the case. To the right of this, or the top as it appears in the illustration, is a countershaft B having thereon two gears E and F rigidly attached and a flanged gear G keyed in position but adapted to slide to the right so as to assume the dotted position G<sub>1</sub>. On the mainshaft A are three gears: A broad gear L in mesh with G and mounted on a sleeve S, the sleeve being loose on the shaft but lockable to the shaft A through a collar T pinned to the shaft and fitted with a jaw ending designed to lock with a similar ending on the sleeve S at which time when locked the gear and sleeve are carried round with the shaft A. On the right end of the sleeve S is a collar in which fits a yoke secured to the shifter rod W. On this rod is a spring tending to pull the sleeve to the right and out of lock with the collar T. In the base of the gearbox is a third shaft, seen in the end view of the case and marked R. On this shaft is a large gear P in mesh with the gear L. The gearset has a fourth or reverse shaft N carrying a broad gear M which can be moved upon its shaft. In direct forward drive the power communicated to shaft A is transmitted direct to gear P and shaft R and from this shaft to whatever machinery is driven. On this speed the sleeve S is locked with the collar T to the shaft A as shown and the countershaft B with its gears revolves owing to gear L being in mesh with gear G. On the other forward speeds sleeve S is carried to the right out of lock with collar T so that shaft A can revolve and sleeve S remain idle. For intermediate speed gears K and F are

meshed when the power is so delivered to countershaft B and thence back through gear G to gear L on sleeve S and as the gear A is in mesh with gear P on shaft R the power is communicated to this shaft and thence to the machinery. For the low speed gears H and E are meshed whence the transmission is through gears G and L to gear P and shaft R. For the three reverse speeds the broad reversing gear M is moved to the left through its shifter rod X so that the gear meshes with gear P on shaft R and at the same time the sleeve S with gear L is carried forward out of mesh with gear P and this movement carries gear G along with it. Then the transmission is as follows: Shaft A drives through gears H and E or K and F to shaft B and thence the power passes through gear G to L and to reverse gear M and thence to gear P and shaft R. The third illustration shows the quadrant plate for the footboard of the car. There are two slots for two levers. The slot 1 has three offsets marked 2, 3 and 4, and in the ends of each offset is a notch 7. The other slot 5 has but a single offset 6 with end notch 7. Slot No. 1 gives the three speed changes for forward and reverse and slot No. 2 is for moving the reverse gear. The offsets are provided so that the clutch can be disengaged and engaged by the change speed lever.

#### MOTOR CAR LITERATURE

Commercial motor cars are described in a catalogue issued by the A. D. Meiselbach Motor Wagon Co., North Milwaukee, Wis. Inside of the book is shown the McKaig double miter friction drive as applied to a truck chassis, a 1-ton stake truck, a 1-ton panel side delivery wagon and letters from users of the Meiselbach product.

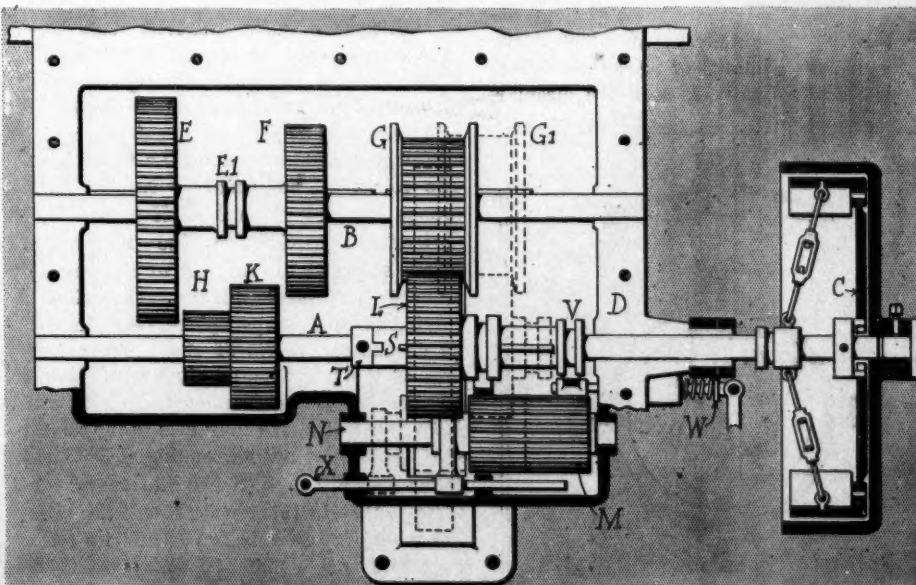
The Corbin Motor Vehicle Corporation, New Britain, Conn., has a handsome catalogue, the frontispiece being particularly catchy. The company devotes two pages to telling of the advantages of the air-cooled



QUADRANT TROEGER GEARSET

motor, then it goes on and describes the Corbin motor, the cylinders, ignition, power, durability and lubrication and shows half-tone illustrations of the Corbin chassis, transmission, rear axle and crankshaft. A catchy illustration is one showing the Corbin limousine.

The Welch Motor Car Co., of Detroit and Pontiac, Mich., has issued probably the most unique catalogue of the year. In order to impress in an emphatic way on the reader's mind that few changes have been made within the past 3 years to keep the Welch car fully ahead of the time, it presents the subject matter of its 1904 and 1907 catalogue side by side. This is done by printing the 1904 matter in black type and the 1905 and 1907 editions and changes in red. The company claims to be pioneers in the application of the multiple disk oil bath clutch, the superimposed integral cams and camshaft, the finished spherical combustion chamber with the inclined inverted valves, the non-sagging truss reinforcement to the offset frame channel and the genuine honeycomb radiator and in the pages of the catalogue brings these points before the reader.



TROEGER'S TRIPLE FORWARD AND REVERSE GEARSET

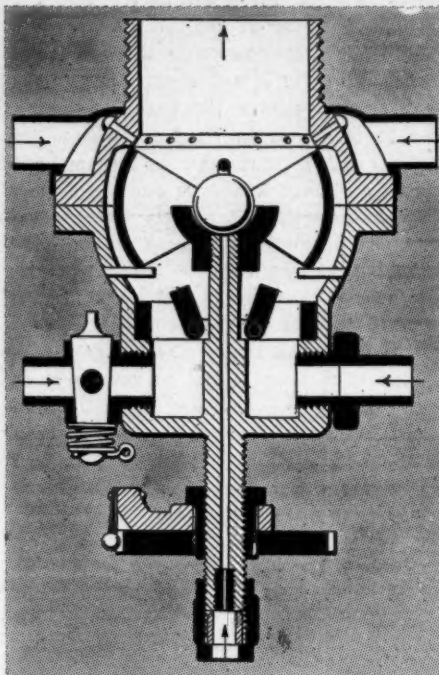


## DEVELOPMENT BRIEFS



### CARBURETOR WITHOUT A FLOAT

Charles D. Shain, 70 Murray street, New York city, employs two or three new features in the Shain ball spray carburetor. A cursory examination of the vertical cross section of this carburetor as produced herewith will convey its leading innovations. First of all it is of the floatless type, the regulation of gasoline being controlled by a large ball valve resting in a cup receptacle in the top of the pipe through which the gasoline enters. This ball is placed in the center of the mixing chamber. The mixing chamber is a semi-spherical space with the gasoline standpipe rising centrally through it from the base. Entering this space horizontally at the base at opposite sides are two hot air supply pipes, that at the right open and unobstructed but that on the left fitted with an adjustable valve. In the mixing chamber a short distance above these pipes and hinged to the gasoline standpipe are two flap doors shown in a vertical position. With the motor at rest these lie horizontally and obstruct the entrance of all air; with various motor speeds they are lifted as shown in the illustration. Entering the mixing chamber near its top are two horizontal auxiliary hot air pipes from which the air enters the mixing chamber through a series of small circular ports above the spherical portion of the chamber. The exit to the engine is directly on top and the escape of the mixture is under the control of a semi-spherical throttle formed by cutting away a part of the opposite halves of a hollow sphere, the portions of this sphere remaining being a pair of opposite V-shaped pieces—one in the right and the other at the left side of the mixing chamber. The theory of the carburetor's operation is that the motor suction is sufficient to partially raise the large ball from the cup on the top of the standpipe at which time the required amount of gasoline flows. Above this ball valve is seen the circular



SHAIN'S FLOATLESS CARBURETOR

end of an adjustable spring resting on top of the valve and by which the movement of the ball is regulated. The lift given to the ball is according to the location of this spring. A further adjustment of the ball is occasioned by a ratchet surrounding the standpipe beneath the base of the mixing chamber. An automatic locking device is fitted and seen in the form of a ball locker at the left side. By raising or lowering this ratchet the lift of the ball is varied. The carburetor can be used with gravity or pressure feed gasoline tanks.

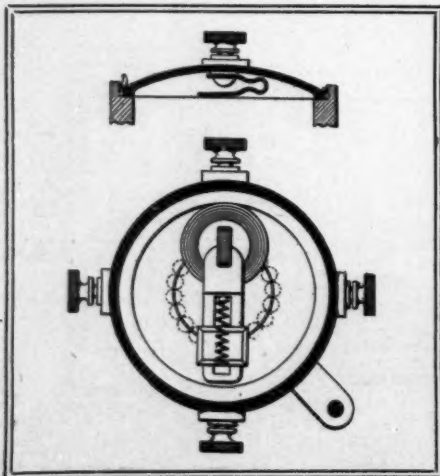
### TIMER OUT OF ORDINARY

In the Quad timer, manufactured by the Quad Mfg. Co., Columbus, O., the revolving contact is quite different from anything previously attempted in this line. While it is of the roller variety it differs in several regards from such styles of roller contacts as are now in use and which are largely fashioned along La Coste lines. The roller in the Quad is carried on a bronze rotating central shaft shown in a horizontal position in the illustration which shows it on the end of a camshaft or other horizontal member. The roller is carried on an L-shaped piece, being mounted on the short arm of the L. The long arm of the L is pivoted close to the angle on the revolving commutator shaft and from the end of the long arm to the center shaft is a short spring tending to hold the roller outward against the stationary contacts. Should this spring break the peculiar weighting of this L arm and its roller contact is such that the roller would be held outward by centrifugal force. Other than this feature in connection with the

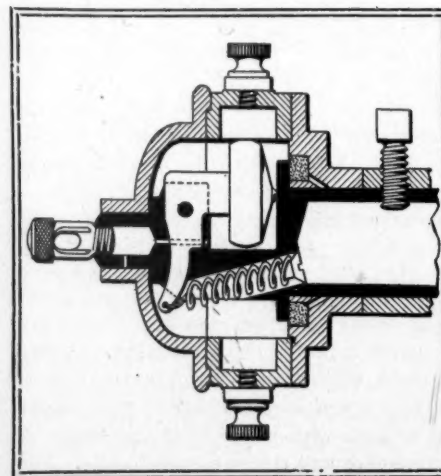
roller is the convexing of the perimeter of the roller and also the cupping out of the roller to lighten it. The casing for the timer is an aluminum front cover with the back portion supporting the revolving shaft formed of gray iron. The stationary contacts, one of which is seen directly above the roller, are steel blocks entirely surrounded with a fiber insulation ring. The oiling is carefully looked after in that the commutator is fitted with an oil well which furnishes lubricant to the top bearing and also to the roller. Fitted also is a felt oil retainer in the bottom which, besides absorbing surplus oil, in turn feeds this oil to the lower bearing. The Quad timer, although shown attached to a horizontal shaft, is equally suitable for shafts mounted at any angle, as its lubrication system is not disturbed by its particular location. Its case is dust and water proof and very complete.

### TIMER AS MADE BY MOSLER

The top view of the Mosler timer coming from A. R. Mosler & Co., New York, shows that this timer is constructed on the eccentric principle. The four stationary contacts are regularly distributed at 90 degrees in the outer circle of the commutator casing, so the inner ends of these contacts and the insulation forms a continuous circle, the same as in commutators manufactured after La Coste ideas. The revolving contact, however, is a roller running on an exceedingly large diameter bearing and which bearing is well furnished with lubricant by a special oil lead. The roller is carried on the end of a crosspiece on the revolving shaft and is constantly forced outward by a spring acting directly behind it. The contacts in the fiber casing are tri-metal pieces. The center is steel used for its good wearing surface; at each side of this are soft copper straps for conducting the current. Outside of these are two strips of brass used because of their being soft and affording a close fit.



MOSLER'S ECCENTRIC TIMER

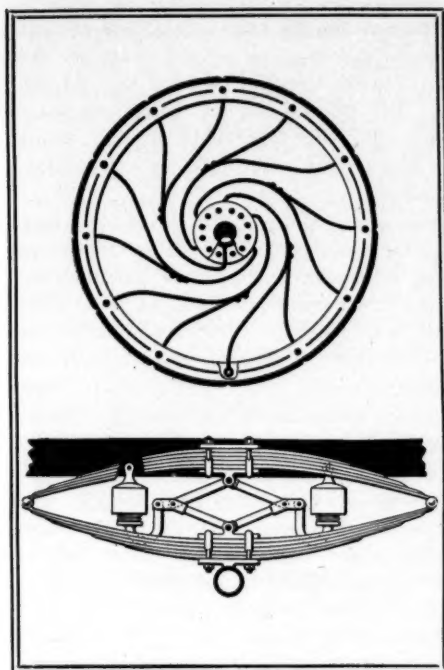


QUAD ROLLER TIMER





# CURRENT MOTOR CAR PATENTS



CHILD'S WHEEL

WHITTLE'S SPRING

**Motor cylinder**—No. 843,759, February 12; to H. P. Martin, Paris, France—In this patent reference is made to the method of attaching a cylinder head to the cylinder wall in a gasoline motor, as well as the attaching of the copper waterjackets at the upper end. The cylinder wall and head have aligned openings, both threaded internally. The waterjacket enters between the top of the wall and the cylinder head and a hollow nut threaded on its outer surface and fitting in the aligned openings of the wall and head clamp the two together.

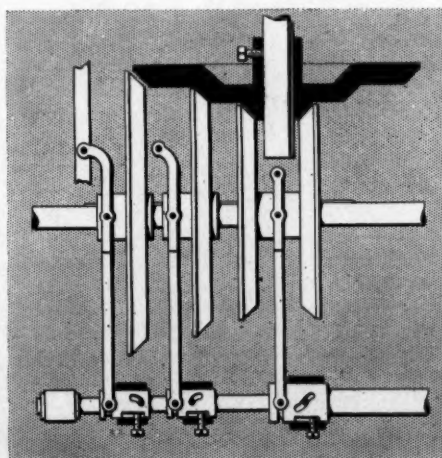
**Combination Spring**—No. 845,210, dated February 26; to J. C. Whittle, Jackson, Mich.—Besides entrusting the absorption of vibration and jar to a full-elliptic spring the inventor couples with this spring a pair of spirals to assist in the elimination of the vibration. The attachment of the spirals follows: Coupled to the side member of the car frame are two vertical cylindrical pockets containing coil springs, one pocket opposite the forward half of the elliptic spring and the other opposite the rear half. The bottom of the spirals rest upon circular disks supported on a curved trap which is pivoted to the end of an arm. This arm is the lower one of four forming a diamond arrangement within the spring oval. The end of this diamond arrangement, as seen in the illustration, is pivoted to the springs and the top centers to the top and bottom of the spring centers. This arrangement brings the spirals into action, curbing any sudden spring jolt or rebound. Should the top and bottom halves of the elliptic tend to

separate too suddenly the spirals restrict them. Should they come together too quickly the resistance of the spirals is experienced.

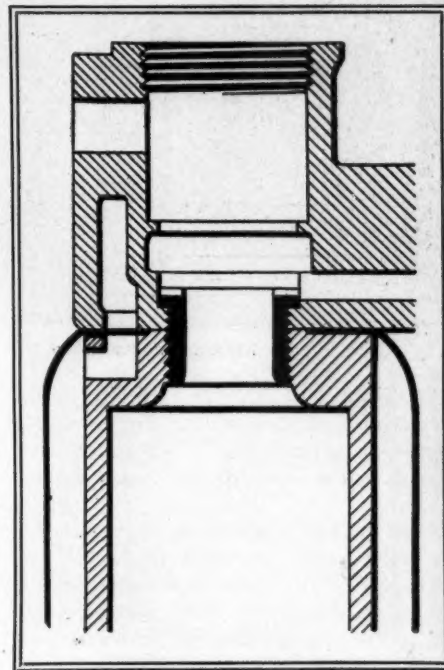
**Spring Spokes**—No. 845,054, dated February 26; to S. S. Childs, Bernardsville, N. J.—Each spoke in the wheel intended for light motor vehicles is a scroll-shaped flat spring. At the hub end it has a radial fit but immediately on leaving the hub it gradually curves in the direction of rotation and unites with the rim at a point diametrically opposite to that from which it emerges from the hub. Midway of its length it gives off a curved branch which unites with the rim at another point. Where the ends of the spokes unite with the rim they are enlarged, forming an eye-hole. The rim is formed in segments, the length of each segment being the distance between the ends of two adjacent spokes. These segments are held together by a pair of circular side flanges.

**Friction Transmission**—No. 840,202, dated January 1; to J. P. Davis, Chicago—On the end of the driveshaft from the motor is a stepped friction wheel consisting of three beveled friction surfaces, all three beveled surfaces being on the same cone. The smallest surface is for slow speed, the intermediate one for second speed and the largest for high. Placed in rear of this stepped cone is a cross shaft carrying four friction wheels with edges beveled and made in size to contact with the beveled surfaces on the stepped cone. Of these four, three on the left are for the forward speeds and that on the right is for reverse. By means of a lever these bevel friction wheels on the cross shaft can be slid into mesh with their corresponding bevels on the stepped cone. The patent covers the design in case bevel gears should be used in place of the friction surfaces.

**Hotchkiss Anti-Jolt**—No. 848,088, dated February 26; to P. M. Hotchkiss, Chicago



DAVIS' FRICTION TRANSMISSION



MARTIN'S CYLINDER HEAD

—The shock-absorber referred to is one that has been on the market for over a year and known as the Hotchkiss. It consists of a cylindrical chamber secured rigidly to the car frame or base of the spring. Within this chamber is a revolving rotating member with a valve system. Filling all of the other interior space is a liquid. The rotating member is connected by arm with the car frame. When the car drops into a rut the spring closes without the device prohibiting it but immediately the rebound begins the liquid prevents the rapid rotation of the interior member, the speed of its rotation being controlled by the valve arrangement regulating the passage of fluid from one side of the rotating member to the other side.

**Pneumatic Hub**—No. 845,135, dated February 26; to W. S. H. Smith, Croydon, Eng.—Within the wheel hub is a large ring-like or annular chamber in which is placed a rubber tire. To the outer surface of this tire is secured an anti-friction band bearing between the tire and inner ends of the wheel spokes.

**Motor Car Turntable**—No. 838,329, dated December 11, to C. W. Hillenbrand, Kansas City, Kan.—This motor car turntable does not require a pit, and when installed works no injury on the garage, or salesroom, floor. It consists of three parts: a circular metal track riveted to the floor; a series of trucks adapted to run on this track, and a platform system carried on the trucks. The platform consists of two track boards on which the car can be run. To facilitate pushing the car upon these, hinged approach pieces are used.



LINING UP FOR GOOD ROADS RUN AT SAVANNAH, GA.

**On Their Own Resources**—A Hotchkiss six-cylinder car has started for a trip in France to extend over 12,500 miles with repairs to be made by the means aboard the car.

**Paris' Latest Scheme**—In Paris the latest traffic regulations give the motor car the right of way down the center of the street, requiring the slower moving vehicles to keep on the sides of the avenue.

**Calls Forest Six-Cylinder Pioneer**—F. F. Wellington, of England, who has been disputing the claims of S. F. Edge to being the first to use a six-cylinder engine in a motor car, has withdrawn from the controversy, asserting that Forest, a Frenchman, beat both of them when he built six-cylinder motors in 1888.

**President Roosevelt in Limousine**—During President Roosevelt's visit to Boston much of the time that was spent in making calls from one place to another was passed in Bishop Lawrence's big Packard limousine. It is one of the 1907 cars, and as the thermometer was hovering between 4 and 10 above zero the 2 days the president was in the Hub the limousine proved an ideally comfortable vehicle. It enabled him to cover a lot of ground and make calls that otherwise he would have been unable to accomplish in the time he had.

**Sale Week for Hoosiers**—Arrangements are being completed by Indianapolis dealers and manufacturers for a sale or show week to be held some time in April or early in May. The plan for a sale week is the outgrowth of various futile efforts to hold a show such as is held in other cities. The only available building, however, has its auditorium on the second floor, with no provision for getting anything like a motor car up to it. Hence plans from year to year for a show have had to be abandoned. It is expected local factories will make special provision during the week for entertaining visitors. The garages and

agencies will be elaborately decorated and special salesmen and demonstrators will be employed during the week. By means of posters and newspapers it will be widely advertised.

**Endurance Route Announced**—The route for the endurance run the New Jersey Automobile and Motor Club of Newark will promote next spring has been chosen. The first day the cars will travel from Newark to Montclair, Pompton, Boonton, Denville, Dover, Mount Carmel, Morristown, Madison, Chatham and Milburn, back to the starting point. The second day the competing machines will be driven to Atlantic City by way of Trenton, and on the third and final day will return to Newark through the sea coast cities. Two prizes are offered for the tour, the Shanley cup for touring cars and another trophy for runabouts. The entry fee is to be \$15

for each machine. H. A. Bonnell, secretary of the club, is chairman of the committee, and his associates are: President J. H. Wood, Bernard M. Shanley, Jr., W. C. Shanley, H. P. Cook, L. T. Wise, W. M. Kimber and Dr. J. R. English.

**Tourist Trophy Dates**—The Isle of Man highways board has set the dates for the two Tourist trophy races for May 28 and 30. The Englishmen are protesting somewhat, claiming that Whit Monday comes on May 20 and that the races are too near a holiday.

**Nuremberg's Strength**—Taxes have been paid in Nuremberg this year for 168 motor cars, of which 152 are for personal use and sixteen are goods vans. One hundred and twenty cars are 8 horsepower and below, thirty-five between 8 and 16 horsepower and four are between 16-40 horsepower. There are in addition eight motor cabs and two electric autocabs.

**Tries Jail Labor**—Street Commissioner Clayton, of Greenfield, Ind., is just now experimenting with jail labor on street cleaning and improvements. The lack of an appropriation and the scarcity of labor prompted him to apply to the county commissioners for relief. As a result prisoners in the county jail are putting in their time cleaning the paved streets and making minor improvements.

**Jail or Pay**—Owners in Indianapolis must pay for vehicle licenses, pay a fine or go to jail this season, according to an edict issued from the city hall in that city. What's more, it must be done by April 1. In addition to paying a state registration fee Indianapolis owners are permitted to pay an annual license of \$3. Heretofore

the law has been loosely enforced, as witnessed by the fact that last year only about 425 of the 800 owners went to the trouble to obtain the metal tags. This year, however, the city needs the money, and it will be either a case of pay or go to jail.

**Good Roads Run Held**—The first spring run of the Savannah Automobile Club was by far the most successful ever held in Georgia. The object of the run was to primarily demand the improvement of the Ogeechee road. The sight of fifty motor cars on the Ogeechee road was a unique one. Had a fleet of warships been anchored around the old piers it would not have been more remarkable. Forty years ago, when the old bridge between Chatham and Bryan counties was burned, who could have predicted that \$100,000 worth of motor cars would congregate around the abandoned piers and demand that the old bridge be rebuilt? Savannah now has over 500 machines and the number is growing every day. The paved streets and roads are better than any in the south, and nowhere are better



POSTER ISSUED BY A. M. C. M. A., SHOWING MODELS



grounds for the sport offered than in Savannah. Savannah has many miles of paved streets and roads, and hundreds of tourists flock there annually with their cars to gain the advantage of the good and long roads, where no speed limit exists.

**A. C. A. Year Book Out**—The 1907 year book of the Automobile Club of America has just been issued. It shows 1,000 active, 229 associate and six life members. Last year the club lost by death fifteen members.

**After the Thieves**—The Automobile Club of Buffalo is determined to put a stop to the theft of cars in that city, and at a recent meeting of the board of directors it was decided to offer a reward of \$50 for the arrest and conviction of any person stealing a car the property of a member of the club.

**Toledo's Tag Law**—Two dollars each is what it will cost to run motor cars in Toledo from this time on. The license ordinance has been passed and approved by Mayor Whitlock. Tags will be purchased probably this week or as soon as the legislation providing the fund is passed. The ordinance becomes effective on and after it is advertised, which will be about March 1.

**German Outlook**—According to an official report received at Washington, the use of motor cars is spreading rapidly in Germany and numerous manufacturers are now meeting the growing demand. Several of these manufacturers, it is stated, are now manufacturing speedometers among their accessories. French speedometers are largely in favor in Germany, however. In Germany, as in all continental European countries, the dials of speedometers and cyclometers are arranged to indicate kilometers. The import duty on motor car accessories is not high, being 10.8 cents per pound, and has practically no effect on the sale of an article worth \$100 or more with a weight of less than 4 pounds.

**Tough Trip in Zero Weather**—Toledo was the terminal point of a remarkable trip from Detroit and return a week ago last Thursday. Charles Gilmore, assistant general manager of the Maxwell-Briscoe-McLeod Co., of Detroit, driving a Mitchell four-cylinder 24-horsepower car, left Detroit in a blinding snow storm for Toledo. He was accompanied for a part of the trip by two friends, who left the car at Monroe, Mich., and refused to complete the trip because of the horrible condition of the roads and the bitter cold weather. Mr. Gilmore continued the journey and finally landed in Toledo half frozen and worn out. Mr. Gilmore was persuaded to try the trip again the next morning accompanied by F. B. Smith. When the two men left this city the temperature was 8 degrees below zero, and before they had more than half



TOUGH ROAD ENCOUNTERED BY CHARLES GILMORE

finished their run they encountered a blizzard and it was under these conditions that the trip of 85 miles was finished in 5 hours and 10 minutes.

**Newport Tags \$10 Each**—Cincinnati motorists desiring to drive into Newport are obliged to pay a license fee of \$10 a car, a recently passed measure that is being rigidly enforced.

**Good Roads in Indiana**—Some idea of the Indiana road system is given by a bulletin just issued by the agricultural department. The bulletin shows that there are 68,306 miles of roads in the state, of which 23,827 miles are improved, 20,586 being surfaced with gravel and 3,295 miles with stone. It is estimated that the amount expended on roads last year was almost \$4,000,000, while in the last 10 years no less than \$11,086,983 has been spent on public roads from bond issue alone. There

is 1 mile of road for every thirty-six inhabitants and 1 mile of improved road for 105 inhabitants.

**Road To Be Built Right**—Park commissioners in Spokane are ready to receive bids for the Maniton Park boulevard, to cost \$11,000. It will be one of the best driveways in the northwest. The plans show a driveway 50 feet wide on a foundation of basalt rock.

**Popular in South Africa**—In South Africa motor trucks are in great favor. It is considered that the car does the work of five ordinary wagons with ten horses and five coachmen. There is a question of establishing a special road for motor cars between Givelo-Charter and Victoria, the cost of which would amount to \$2,000 per mile, whereas the cost of a railway line would be \$20,000 per mile.

**Examine Kelly's Thomas Motor**—The motor of the Thomas Flyer, which during January broke all non-stop motor records and then made an overland trip from New York to Chicago, arriving at the latter city in time for the show at the Coliseum,

was taken down in Buffalo. Prior to that time the motor had run continuously for 21 days, 3 hours and 29 minutes, or over 507 hours, breaking the previous world's record by over 307 hours and afterward establishing in the cross-country run a record for reliability that is unique. In addition to the officials of the Thomas company a number of members of the Automobile Club of Buffalo were present. The compression was found to average 66 pounds for the four cylinders, the normal compression being between 65 and 70 pounds. When the cylinders had been removed their interiors were perfectly smooth. The exhaust valves showed only a slight trace of carbon deposit. This was the first chance the Thomas people had to examine the motor, for after the Chicago show it was shipped to Buffalo and was on exhibition there all through that show.



PARIS' NEW METHOD OF CONTROLLING TRAFFIC



# THE REALM OF THE



FIVE CHICAGO MOTOR DISPATCH AIR-COOLED DELIVERY WAGONS IN CHICAGO DELIVERY SERVICE

CHICAGO is witnessing the opening chapters of a new delivery system known as the Chicago Motor Dispatch and in which half a score of air-cooled Logan delivery wagons are being operated on scheduled service, delivering light parcels for various merchants within the loop district. The wagons used are of the 10-horsepower type with carrying capacity from 1,200 to 1,500 pounds and are fitted with enclosed delivery bodies with carrying space 5 feet 6 inches long, 4 feet 8 inches high and 3 feet 6 inches wide. The machines have a wheelbase of 86 inches, 30-inch wheels with 3-inch Swinehart tires, are geared for 15 miles per hour and have Timken bearings all through. Spring suspension is through a set of four full elliptics and braking is entrusted to a clamping band operating on the drum on the differential on the rear axle. The Chicago Motor Dispatch, capitalized at \$25,000, proposes to continue to extend this system and employ a score of delivery wagons within the next few months. At present the system in its infancy is not working all the time on schedule service but the intentions are to begin collection of parcels from the many stores within the loop district at 8 a. m., this collection continuing until 10 a. m., when all of the wagons return to the headquarters of the Chicago Motor Dispatch Co., at 347 Wabash avenue, where a gang of four professional sorters are employed for distributing the parcels distributed according to the portions of the city they are to be delivered to. This sorting work being accomplished in half an hour, at 10:30 the various wagons start for the many parts of the city on their delivering missions and are expected to be back again at 1 p. m., 2½ hours being considered sufficient for the work. Following this is 30 minutes for luncheon and at 2 p. m. the wagons start out on a pickup excursion of the loop

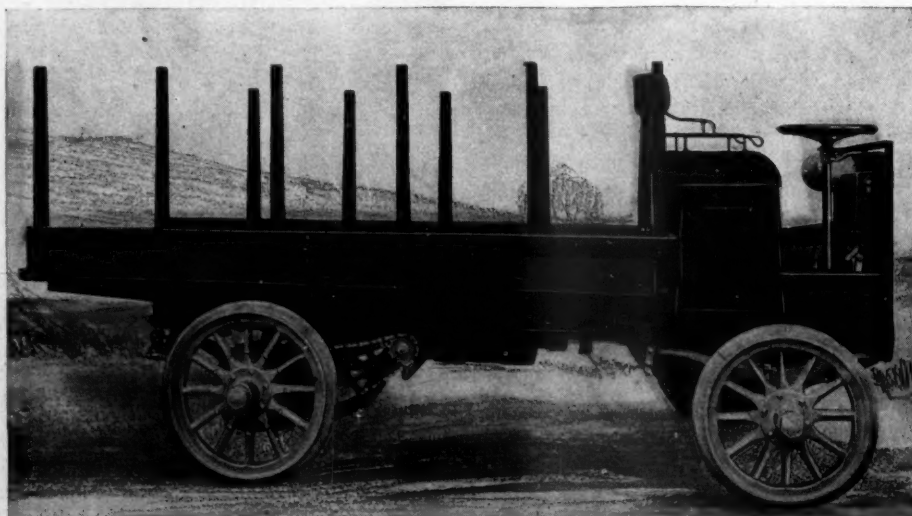
district which continues until 3 p. m., when they are all due to return to headquarters. From 3 until 3:30 the sorters are doing their work and at the latter time all wagons are started on their city delivery and expected to return by at least 6 p. m., when the day's work is ended. On Saturdays an additional collection is made from the loop district at 5:30, all of which parcels are delivered that evening. Each wagon is controlled by an experienced driver, the present intention being to employ chauffeurs over 21 years of age whose duty it is solely to manage the machine. Assisting each driver is a jumper boy who not only delivers all of the parcels from the wagon to the houses but assists in loading at the stores as well as in the collection from them. A coupon book system for pay is used. Books containing \$50 worth of 10-cent coupons are sold to the different concerns and each time a parcel is collected the required amount of coupons is pasted on it and immediately checked and canceled by the driver. The present

## A Chicago Motor

charge is 10 cents for parcels under 10 pounds delivered within a short radius and 20 cents for parcels over this weight and delivered a greater distance. The present clientele consists of many of the leading shoe merchants, none of whom operate private delivery systems, but who depend entirely upon city express service; haberdashers, millinery stores, florists, drug stores and a score of other concerns. While the wagons have a capacity of 1,200 to 1,500 pounds it is expected the average load of the kind of merchandise carried will rarely exceed 800 or 900 pounds.

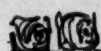
### DETROIT GETTING READY

Detroit is thinking about using motor cars in its fire department. At least it is providing Chief Broderick with one so he can make his inspection trips and attend fires in a motor instead of horse-drawn vehicle. An illustration shows the chief making a tour of inspection in a Wayne



SAYERS & SCOVILL'S AIR-COOLED 1½-TON TRUCK





# COMMERCIAL CAR



LOGAN TRUCK HAULING LOGAN DELIVERY WAGONS FROM FACTORY TO RAILROAD STATION

## Dispatch System

car in company with the members of the fire commission. Already Detroit has used motor cars in many of its municipal departments and it is the success attendant upon these trials that has directed the attention of the fire chief to them. Detroit, the premier motoring city of the country from a manufacturing standpoint, has for some time watched the experiments made in eastern cities along the line of motor fire fighting machinery.

### NEW TRUCK BUILDERS

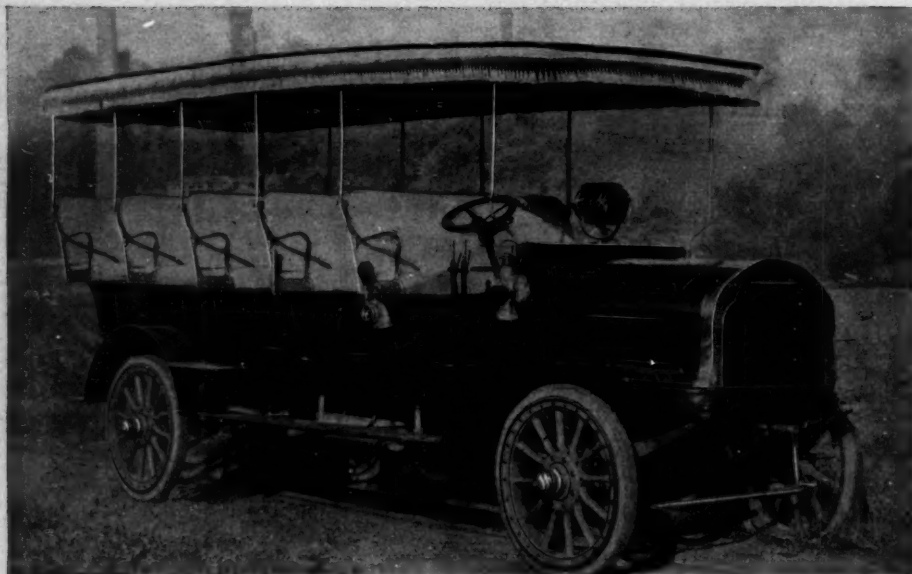
One more name added to the list of American motor truck builders is Sayers & Scovill, 2247 Colerain avenue, Cincinnati, O., who have brought out a 3,000-pound carrying capacity air-cooled truck fitted with 25-horsepower four-cylinder vertical motor located in front beneath the seat and footboard and delivering its power through an expanding clutch three-speed sliding gearset with contained differ-

ential and by side chains from jackshaft to rear wheel sprockets. The motor follows conventional lines with separately-cast cylinders each cooled by integral fins 2 inches deep and  $\frac{1}{8}$  inch thick at the base and tapering to a  $\frac{1}{16}$ -inch thickness and ground to a true circle. Valves are placed in cages on the cylinder heads, the cages not pocketed but resting upon the heads. Valves and stems are of two-piece construction and intakes and exhausts are made interchangeable. The cylinders are a composition metal, especially adapted for air-cooled work and are run through a hardening process and finished interiorly by grinding. The crankshaft is hardened and finished by grinding to  $1\frac{3}{4}$ -inch diameter. It has the flywheel secured through an integral flange and six  $\frac{3}{4}$ -inch bolts. The crankcase is an aluminum alloy made with the lower part removable without interfering with the crankshaft or its bearings. Lubrication is by the four-feed style with ratchet-driven oiler and separate pump for each lead. A quadruple coil, Herz com-

mutator and 60-ampere hour storage cell with dry cells in reserve are combined in the ignition portion of the motor. A four-blade fan carried on Hess-Bright bearings assists in cooling the motor. The clutch is an expanding member carried on roller bearings and operated by either of the control pedals, the outer pedal first disengaging the clutch and then applying the emergency brake, and the inner pedal applying the regular running brakes after disengaging the clutch. Changes in speed are made by a sliding gearset giving three forward variations achieved by a lever carried on the steering column beneath the hand wheel. Direct drive on the high speed is utilized. Both shafts are carried on Timken rollers and the line shaft is made with integral flanges to which the gears are bolted. Gears are nickel steel forgings hardened and both shafts are hardened and ground. Incorporated in the rear of the gearset is the differential with the inner ends of the driveshafts of the jackshaft. The outer ends of these shafts are carried on annular ball bearings supported in manganese bronze rings to which are secured the front ends of the radius rods. Sprockets on the jackshaft ends are but  $\frac{1}{16}$  inch from the ball races supporting the shafts. Drive is by Diamond roller chain sprockets on the back wheels. In the car framework are ash sills 5 inches deep and 2 inches wide strengthened on the side by a steel plate the full depth of the sill and made  $\frac{1}{4}$  inch thick. Steel castings are used for strengthening the corners. The front axle is an I-beam piece made straight from end to end and the back axle is a steel member of square cross section  $2\frac{1}{4}$  inches to the side and made straight from end to end. Springs in front are 42-inch semi-elliptics with leaves  $2\frac{1}{4}$  inches wide and in rear is a three-part platform with side springs 42 inches long by  $2\frac{1}{4}$  inches wide and the



DETROIT'S FIRE CHIEF INSPECTING IN WAYNE CAR



MAK PASSenger CAR WITH RATTAN CROSS SEATS

back cross piece 38 inches in length and made with leaves  $2\frac{1}{2}$  inches wide. Car control is confined to a steering column and two pedals. On the column top is a 16-inch hand wheel with throttle and spark levers mounted above it on a stationary quadrant. The gearshift and clutch and brake operation have been referred to.

#### BERLIN CAB RECEIPTS

The weak point of commercial motor cars, and which costs the most money for repairs or renewal, is the tires. At the beginning of the service the motor cabs in Berlin had solid rubber tires, but the public preference for pneumatics obliged the owners of motor cabs to place them on all cars. Most of them, however, did not throw their solid tires away and feel very much inclined to use them again. The yearly cost of the pneumatic tires for a motor cab of moderate daily output is as follows: One set of tires, front wheels without and rear wheels with anti-skidding bands, \$190; one new rear wheel tire with anti-skidder, \$48; six new anti-skid-

ders—these have to be renewed every 6 or 7 weeks but a tire will only last the duration of three anti-skidders, and consequently have to be changed once in the year, \$144; new front wheel tires, \$121; revulcanizing of the front wheel tires—these are revulcanized every 6 or 7 weeks; this operation increases the resistance of the running surface and they will stand this operation three times, \$97.90; revulcanizing of the back wheel tires—these wheels are without anti-skidders and will last about 4 months for two revulcanizings, \$24; total, \$625.80. This represents a daily expenditure of \$1.73 per cab for tires.

The expenses relating to gasoline and oil vary considerably with the ability and carefulness of the chauffeur. In one case, for instance, a motor cab with four-cylinder de Dion and Bouton motor cost for 55½ days' work \$1.18—20.04 liters of gasoline and 0.65 liters of oil. A second motor cab with exactly the same motor, cost for 45½ days' work \$2.14—38.26 liters of gasoline and 0.94 liters of oil. Gasoline cost at

that time \$4 per hundred pounds and lubricating oil cost \$5 per 100 pounds. Actually the price of gasoline is increased to \$5 per 100 pounds and the rentability of motor cabs is thus put in such an unprofitable situation that it seems almost advisable to come back to alcohol as motor fuel, of which the prices have been reduced somewhat this year. The high wages which have to be paid to the chauffeurs are a heavy burden for the owners. The following table shows well the average daily collections and expenses for each motor cab of an important Berlin exploiting company during 1906. The column "chauffeur's wages" naturally gives the wages of two men—one for day service, the other for night service. The only expenses which the chauffeurs have to meet are the cleaning expenses, which cost them \$0.13 each per day, the cleaning being made by a special brigade of men. In some of the companies the chauffeurs do not even participate in these expenses but are employed 1 day per week in the repair shop and only get therefor their fixed day's salary. This situation is very unprofitable for the owners. However, the demand for reliable chauffeurs will decrease in time, and the owners will have to await this period to modify the salary regulations. The table is as follows:

Month	Cars in service	Average daily distance covered, miles	Average daily collections	Salary and participation in profits of two chauffeurs	Average net collections per day and per car
Sept. ....	15	115	\$13.44	\$4.14	\$ 9.30
Oct. ....	16	114	12.70	3.90	8.80
Nov. ....	17	114	13.34	4.18	9.16
Dec. ....	20	111	13.14	3.91	9.23
Jan. ....	20	118	13.86	4.18	9.68
Feb. ....	20	123	14.81	4.44	10.37
March ....	22	118	13.86	4.19	9.67
April ....	22	124	14.39	4.31	10.08
May ....	23	122	14.36	4.26	10.10
June ....	24	121	14.03	4.23	10.80
July ....	24	111	12.65	3.89	8.76
Aug. ....	24	103	11.48	3.56	7.92

It is certain that companies owning many cars have an advantage over the



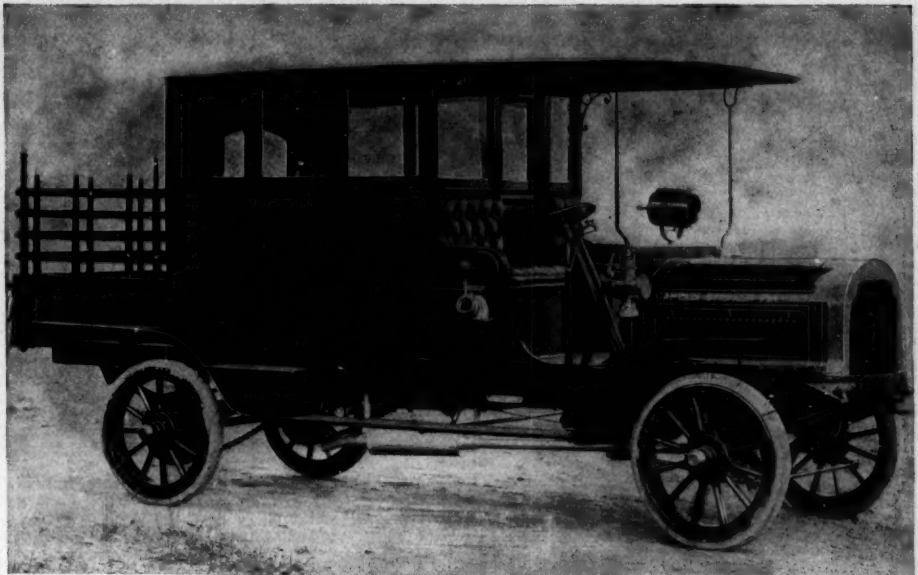
MAK TWELVE-PASSENGER CAR WITH CROSS SEATS UPHOLSTERED IN LEATHER, AND INDIVIDUAL DRIVER'S SEAT



chauffeurs who have only one cab of their own, and who are obliged to have all repairs made by some mechanic and remain idle during the necessary time for the repairs. But on the other hand the salaries which companies have to pay to hire chauffeurs is out of proportion with the collections and expenses. The solution which seems most advantageous and which has been proposed in Berlin would be for numerous small proprietors of motor cabs to club together in the exploitation of a workshop where their cars could be repaired rapidly and where they could find spare cars which they could use while their own is out of order.

#### FRENCH TRIALS BILLED

The French annual industrial vehicle tests will take place between May 20 and June 10, and will include an endurance test and also a fuel-consumption test, based on a useful ton-kilometric calculation. There will be five classes of vehicles, with loads varying from 110 to above 6,600 pounds. The maximum speed will be 16 miles per hour for the fastest cars. This is a new regulation since it has been observed that constructors have in the past forgotten the nature of the test and have placed too powerful motors in their chassis and consequently exaggerated speeds have been observed. The minimum speeds allowed for the competitors is from 5 to 10 miles per hour, according to the various classes in which they are subdivided. The stages each day will be from 80 to 120 miles and the deadweight carried must be of certain material and liable to control and verification at all times, as will also be the fuel. The latter must be a recognized make and the organizers will themselves supply the fuel to the competitors. In short there is nothing left undone to assure a most rigorous inspection and accurate results to be drawn from the trials. The minister of war has signified his willingness to purchase, on behalf of his department, a selection of the heavy weights from each category successfully fulfilling



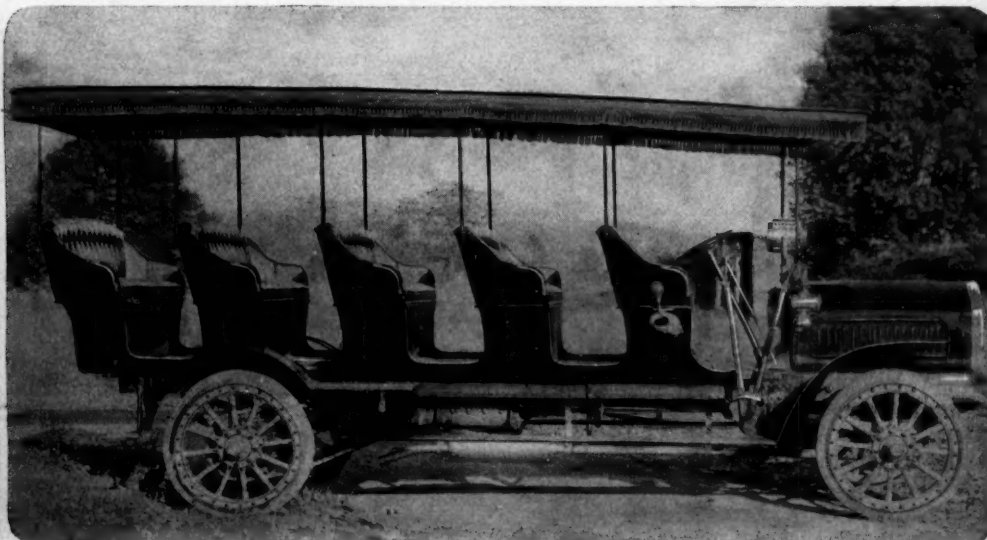
MACK COMBINATION PASSENGER AND BAGGAGE WAGON

the conditions imposed. This action by the minister of war has in past seasons stimulated makers to compete, they being assured of good sales if their cars competed successfully.

#### MACK OBSERVATION WAGONS

Mack Brothers, Allentown, Pa., offer for the approaching season an attractive line of observation wagons, four of which are shown on these pages. Three typical sightseeing wagons are made with cross seats and canopy tops. The fourth is a combination vehicle and is intended for stage work in that it has an enclosed compartment for passengers, a covered seat for the driver and an open baggage-carrying space at the rear of the enclosed section. None of the wagons is built on the gallery plan but is suited for long distance road work rather than "rubbernecking" on city streets. The entire line of passenger commercial cars manufactured by Mack Brothers is as follows: Twelve-passenger leather upholstered car with canopy top, twelve-passenger leather upholstered

bus of the closed type, sixteen-passenger wagon of the tonneau type with leather upholstery and canopy top, sixteen-passenger cross seat car with canopy top, twenty-passenger tonneau car with canopy top, twenty-four passenger cross seat vehicle with top, sixteen-passenger car with cross rattan seats and canopy, and twenty and twenty-four passenger vehicles with cross rattan seats and canopy tops. Motors used in these cars are of 30, 50 and 70 horsepower and in every case consist of four vertical water-cooled cylinders cast in pairs with the valves placed in the floors of ports on the right side. The Mack clutch is a reversed cone with leather facing, and speed changes are through a three-speed gearset with final drive by side chains. Chassis frames are of channel steel made from two pieces, each piece forming a side and half of each end of the frame, being bent at the corners and riveted together at the centers of the ends to accomplish this. Springs in front and rear are half elliptics and all road wheels are carried on Timken roller bearings.



MACK OBSERVATION WAGON WITH TRANSVERSE LEATHER UPHOLSTERED SEATS AND CANOPY TOP

# AMONG the MAKERS and DEALERS



THIRTY FREIGHT CARS CARRYING NINETY BUICKS TO PENCE COMPANY OF MINNEAPOLIS

**Hoblitt Joins Berliet Forces**—F. M. Hoblitt, late of the Aerocar Co., has become sales manager of the American Locomotive Automobile Co.

**Fisher With Mercedes**—John T. Fisher, formerly with the De Luxe company, has opened a Chicago branch for the Mercedes Import Co. at 319 Michigan avenue. He will control western territory.

**Holsman Shipments**—W. Hildreth, manager of the Holsman Automobile Co., Chicago, announces that the company recently shipped fifteen cars in 1 day and thirty-five that week. The Holsman factory, he says, has been running night and day for the last 2 years.

**Takes Reliance Business**—A deal has just been closed whereby a newly-organized Philadelphia company has taken over the touring car business of the Reliance Motor Car Co., of Detroit, Mich., that concern having decided to confine its operations in the future to the building of commercial vehicles. W. F. Rudolph will be manager of the business.

**Will Also Make Motor Boats**—The Royal Motor Car Co., of Cleveland, O., will make motor boats as well as motor cars. The performance of the XYZ, driven by a Royal motor, in the salt water races at Marblehead last summer called the attention of the company to this branch and largely influenced it in deciding to take up the manufacture of boats. W. C. Jaynes & Co., Buffalo, have been appointed agents for the Royal car in Buffalo.

**Elects Officers**—A new set of officers has been installed by the Interstate Automobile Clearing Co., and Louis S. Caswell has been placed at the head of the company. The change was made at the second annual election, held at the company's headquarters, 1931 Broadway, New York. Following are the officers elected: President, Louis S. Caswell; vice-president, James Geary; secretary, James M. Carples; treasurer, F. I. Hauptman; directors, William B. Thom, William E. Metzger, William J. Dixon, John Slattery, Hermann F. Cuntz, Louis S. Caswell, Charles A. Wardle, F. I. Hauptman, James Geary. The

company does not buy or sell cars, but does a purely brokerage business in second hands, covering the entire United States.

**Marmon's Chicago Agent**—The Maxwell-Briscoe-Chase Co., of Chicago, will handle the Marmon in Chicago and vicinity, the Nordyke & Marmon Co. announces.

**Benjamin Changes**—C. A. Benjamin has resigned as secretary and sales manager of the Babcock Electric Carriage Co., of Buffalo, to become vice president and general manager of the Aerocar Co., of Detroit.

**De Luxe Factory Growing**—Two large wings are being added to the De Luxe factory at Detroit, made necessary by increased business and new machinery purchased by the company. It is stated that the De Luxe people have, during the last 3 or 4 months, invested approximately a quarter million on machinery.

**Making Clinchers**—It is the intention of the Empire Automatic Tire Co., of Trenton, N. J., for the present to make clincher tires only. The company also is making ordinary gray tubes and extra thick red tubes. The Empire tire is made with a raised tread and is produced by one cure, open steam process. Officers of the company are: President, Charles H. Semple, formerly secretary and sales manager of

the G & J Tire Co.; secretary, A. Boyd Cornell; general salesman for the company, W. G. Whitlock.

**February Registrations**—During February more than 700 motor cars were registered at the office of the New York secretary of state at Albany. The total registration to March 1 is 36,680.

**Close in the Trade**—Former Secretary-Treasurer George W. Close, of the defunct Pennsylvania Electric Vehicle Co., has joined the staff of W. J. Sprankle, Philadelphia agent for the Reo, Premier and Hotchkiss.

**Receiver Appointed**—Announcement is made that the Pennsylvania Trust Co. has been appointed receiver for the Duryea company, of Reading, Pa. The appointment was made at the request of the creditors and with the consent of the company's president, H. M. Sternbergh.

**Gives Up Toledo Idea**—The White Co., of Cleveland, made its intentions known a short time ago that it was going to open a garage in Toledo. A large building was leased and preparations were made to open the establishment the middle of March. The garage will not be opened. A telegram was received in Toledo from headquarters a few days ago stopping all work



TESTERS OF LOGAN CARS LINED UP ON STREET IN CHILLICOTHE, O.





DETROIT FACTORY OF THE DE LUXE COMPANY WHICH HAS BEEN INCREASED IN SIZE

on the building and saying it would be impossible to open this season because the entire output of the factory had been sold.

**Stratton a Kisselkar Agent**—H. C. Stratton, of Boston, has added another car to his line now. He has taken the New England agency for the Kisselkar. He has moved into his new quarters on Huntington avenue.

**Logan Testers**—These are busy days at Chillicothe, O., where the testers employed by the Logan Construction Co. are working in all kinds of weather. Commercial cars as well as the company's semi-racer runabout are being given thorough trials over the road before being sent out. The company announces it now is delivering from twelve to fifteen commercial cars a week to its customers.

**Regarding the Renault**—Paul Lacroix has issued a statement in which he asserts that the Renault Brothers Selling Branch is the direct branch house of the Renault Brothers in this country and the only authorized agent. He claims no other concerns can buy Renaults direct from the factory and that the car is handled only by his branch or its authorized agents, Palais de l'Automobile, New York; J. L. Keir, Philadelphia; Pardee & Canary, Chi-

cago; Cryder & Co., New York City; J. M. Quinby & Co., Newark, N. J., and L. P. McNamara, New York City.

**Kirk Goes to Toledo**—Ezra Kirk, who recently resigned as sales manager of the Thomas companies, has opened a garage in Toledo, his old home, in partnership with his brother.

**Gains Footing in New York City**—The Pennsylvania, a four-cylinder car made at Bryn Mawr, Pa., has established a New York agency at 1871 Broadway, with R. T. Peckham as manager.

**Has More Room**—The Neustadt Automobile and Supply Co., of St. Louis, has added 95,000 square feet of space to its plants at 826-830 South Eighteenth street, in the shape of a store room, which allows it to enlarge all its departments and also to add new ones, notably one for motor boats and kindred lines.

**Croninger's Change**—R. Harry Croninger, who recently resigned as sales manager of the Dayton Motor Car Co., of Dayton, O., has taken up the management of the Pennsylvania Auto Motor Co., at Bryn Mawr, Pa., a concern with a paid in capitalization of \$200,000, and which is building a touring car using a new type of Rutenber engine, a selective transmission

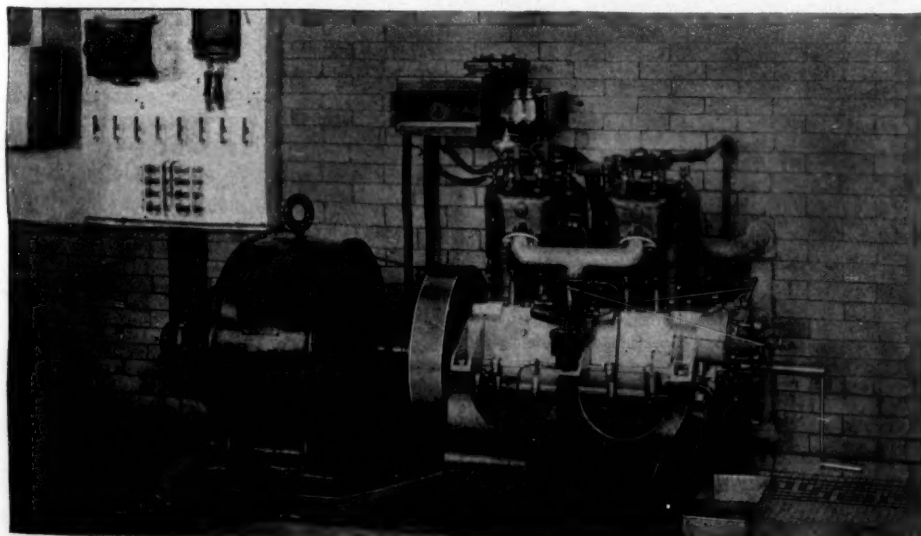
and clutch-driven axle. The company was organized by Charles J. McIlvaine, Jr., of Philadelphia.

**Opens Chicago Branch**—The National Sales Corporation of New York have opened a western branch at 1436-1438 Michigan avenue, Chicago.

**Moves Offices**—The Commercial Motorcar Co., of New York, has moved its offices to room 708, Times building, Forty-second street and Broadway, New York.

**Big Train of Buicks**—The Pence company, of Minneapolis, has just received a train load of Buicks from the factory at Flint, Mich. There were ninety touring cars in the lot and it took thirty freight cars to convey the load. The machines were rushed through for the show in Minneapolis. The total valuation was \$112,500 and the shipment was less than one-third the order of the Pence company.

**Stunt by Packard Motor**—A non-stop engine run equal to 25,898 miles at 32.7 miles an hour is an actual run just completed by a Packard motor. January 9 the engine was started and it ran until February 12, exactly 792 hours, all the time pulling a heavy load. Prior to this extraordinary test the same engine had just completed four non-stop runs of 300 hours each, making a total of 1,992 hours of running, or 65,138 miles at 32.7 miles an hour. The engine is a regular Packard car motor which is in the power plant of the Packard Motor Car Co at Detroit. It is direct-connected with a 10-kilowatt generator of 40 amperes and 225 volts. It runs at 735 revolutions per minute, carrying the full load of 40 amperes continuously. Its original purpose is the generation of current for 160 16-candlepower incandescent lamps in an independent circuit in the factory. Also the engine is used for the testing of lubricating oil of different brands. Between October 30 and January 1 four brands of oil were tested by 300-hour non-stop runs. January 9 the engine was started on an indefinite run with Packard "24" oil. At the end of the usual 300-hour run it was decided not to stop it, but to let it run as long as it would. After 792 hours it stopped because of a broken ignition wire.



PACKARD MOTOR WHICH HAS JUST COMPLETED NON-STOP RUN EQUALLING 25,898 MILES



## LEGAL LIGHTS AND SIDE LIGHTS



### JOLT FOR MOTORISTS

The committee on roads and bridges of the Massachusetts legislature has started off by giving the motorists a severe jolt. The first three petitions referred to the committee and which were supported by motorists were thrown out under the phrase "leave to withdraw." One bill in particular was expected to be reported for favorable action. It was to make horse-drawn vehicles carry lights at night. Arguments were presented showing the advisability of such a law. The other two related to tampering with machines or running off with them and also to make a person stop in case of an accident. The bill by Representative Coolidge to prevent any car being licensed in Massachusetts if able to go more than 20 miles an hour was heard and killed within an hour. When Mr. Coolidge was asked how he proposed to arrange it to take care of the cars now licensed he had no answer. The petition regarding garages which will prevent a man erecting a place for his motor car anywhere in the commonwealth without going through a lot of red tape will be heard soon. No action has yet been taken in relation to the petitions allowing the closing of roads for hill-climbs and to protect those letting cars for hire. The committee heard two other petitions. One was put in by Colonel Sohler, a well-known motorist, who sought to have a penalty put on those who trespassed on private roads. With several others Colonel Sohler has built 16 miles of roads at a cost of \$60,000 on the north shore where children may drive in their pony carts and carriages without fear of meeting motor cars. He wanted the law passed to preserve these roads. While the motorists were in sympathy with his plan, yet it was pointed out that it would lead to lots of other roads being placarded private and if a motorist by mistake got on one he would be arrested and fined. It seemed too broad. The other petition was put in by Representative Porter, of the committee hearing the bills, and asked that a bill be reported paying over to the state the money collected from fines for breaking the motor law. The bill was strongly supported and there was but one person in opposition and he really was not an opponent of the measure but of a part of it. Instances were related where men who were not allowed to go clamming or farming on Sundays and holidays went motor-hunting and got more revenue out of this by soaking the motorists. It was also shown where towns had increased their fire departments and raised salaries of teachers, etc., out of the fund from fines. Massachusetts motorists are tired of this sort of work and believe a measure like the

Porter bill should be passed which would remove the temptation for constables and others to fatten their pocketbooks by making unnecessary arrests. By diverting the fines levied for violations of the speed laws to the good roads fund it is believed that the motorists will not only be helping themselves but the country as well.

### MISSOURI HAS NEW ONE

Missouri reports that the motor bill in which the clubs were interested has been sidetracked and in its place there is a substitute which has made a favorable impression on those who have taken time to study it. One of the points in the new measure is that visiting motorists do not have to take out registration tags unless in the state 20 days or more. In case a car is sold by other than a maker or dealer the seller has 10 days in which to return the registration certificate and the name and address of the purchaser. No certificate of registration will be issued to any person under 18 years of age and removal from the county means that the owner must notify the secretary of state. Drivers will have to wear a badge pinned on their clothing in a conspicuous place. A clause that reads fair says: "Whenever a person operating a motor vehicle shall meet on the public highway any other person riding or driving a horse or horses or other draft animals or any other vehicle, the person so operating such motor vehicle shall reasonably turn the same to the right of the center of such highway, so as to pass without interference. Any such person so operating a motor vehicle shall, on overtaking any such horse, draft animal or other vehicle shall as soon as practicable turn to the right, so as to allow free passage on the left. Any such person so operating a motor vehicle shall, at the intersection of public highways, keep to the right of the intersection of the center of such highways when turning to the right and pass to the left." A hand raised by the driver of an approaching vehicle other than a motor car means a stop not only for the car but of the motor until the person signaling shall have passed.

### WILL DRIVE AWAY TRADE

There is much opposition on the part of Buffalo's business men to the proposed city ordinance which will impose a tax of \$5 upon the owner of each motor car used upon the streets of Buffalo. According to the proposed ordinance, outsiders will be permitted to run their machines on Buffalo's streets not oftener than an average of once a month without paying the tax. The merchants of Buffalo oppose such a measure because they claim it will tend to turn a great deal of trade to other cities they would otherwise secure.

### WOULD SLOW MOTOR CARS

Reduced speed limit for rural highways and a completely revised system of numbering are the principal features of a bill introduced in the Minnesota legislature a few days ago by Representative Thayer, a country member. The bill is not entirely in accord with the views of the motorists of the cities, and it is likely another bill will be presented within a short time, drafted along lines worked out by legislative committees of the Minneapolis and St. Paul clubs. The Thayer bill repeals all existing statutes relative to the regulation of motor cars, and seeks to enact a complete new law. Speed within the city limits, at cross roads, passing schoolhouses, passing teams or pedestrians, passing churches during hours of service, shall not be greater than 8 miles an hour. County commissioners are also given authority to post signs within 1/2 mile of any postoffice or at a greater distance if the country is thickly settled, with the admonition: "Slow down to 8 miles." Speed on other highways shall not exceed 18 miles an hour. The existing Minnesota law places the limit at 25 miles. The question of registration has been a serious one in Minnesota, and doubt is expressed as to whether the Thayer bill offers any adequate solution of the difficulties. The bill provides that every owner of a car shall pay \$2 to the secretary of state, and receive in return a certificate, said certificates to be "consecutively" numbered. The state license law shall not interfere with the enactment of local ordinances. The twin city clubs have proposed a bill to arrange a system of numbering which will render a car distinguishable at once as to its city and county. The Thayer bill is believed to offer a poor solution of the difficulty. The Thayer bill also provides for the licensing of drivers by the secretary of state at \$2 each, the driver being compelled to state the cars which he is competent to drive, and being required to carry his license with him continuously. This provision is not to apply, however, to the employees of owners of registered cars. Two other bills have been introduced in the Minnesota lower house. One, by Representative Libby, gives county commissioners the right to close any road to motor cars when they believe the passage of such vehicles endangers other traffic on the road. A bill fathered by Representative O. B. Nelson is an amendment to the present law, and requires the operator of a motor car to stop his car when approaching horses or mules, and to get out and lead the animals by in case they become excited and unmanageable and threaten to get beyond the driver's control and possibly run away through fright.





# BRIEF BUSINESS ANNOUNCEMENTS



**Erie, Pa.**—The Erie Electric Motor Co. has increased its capital from \$250,000 to \$1,000,000.

**Kittery, Me.**—The National Brake and Clutch Co. has voted to increase its capital stock from \$50,000 to \$100,000.

**Lansing, Mich.**—The Packard Motor Car Co., of Detroit and Warren, O., has increased its capital stock from \$650,000 to \$1,000,000.

**Tacoma, Wash.**—A new garage has recently been completed by Wing Brothers, proprietors of the American Automobile Co., at 204 St. Helens avenue.

**Elmwood, Conn.**—The Whitlock Coil Pipe Co. has filed a certificate increasing its capital stock from \$300,000 to \$400,000. The company manufactures feed water heaters, condensers and coolers.

**Chicago**—A charter has been granted to the Jere C. Critty Co., capital stock \$2,500, to engage in the manufacture and sale of motor cars and accessories. The incorporators are L. E. Hart, J. B. Montgomery and F. W. Kraft.

**Buffalo, N. Y.**—The Imperial Motor Car Co., of which C. B. Penney is the president, is about to erect a two-story brick garage at 1094-1100 Main street. The building will cost about \$30,000, and is to be completed by May 1.

**Nashville, Tenn.**—Charles Coddington, the manager of the Southern Automobile Co., has tendered his resignation, and will go to Atlanta, Ga., where he will be manager of the Capital City Automobile Co. J. E. Yowell will be Mr. Coddington's successor here.

**Rochester, N. Y.**—The Automo Cabinet Co. has been incorporated at Albany with a capital stock of \$10,000, and will engage in the manufacture of motor car tools and repairing implements. Among those interested in the concern are A. J. Mahon, E. A. Bircher and A. H. Puck, all of the city of Rochester.

**New York**—Palmer & Christie have dissolved partnership and will be succeeded by the Martini Import Co. as agents for the Martini. The Martini Import Co. has been incorporated with a capital stock of \$80,000, by P. S. Palmer and J. S. Freeman, of New York city, and F. L. Quimby, East Orange, N. J.

**Springfield, Mass.**—A new company has been organized here to be known as the Med-Bow Automobile Co., and will commence the manufacture of a touring car in the old school building in Brightwood. The capital stock of the company is \$25,000, but it is expected to triple it within the year, and also to secure better and larger shop quarters. H. A. Mederaft, who is the organizer of the concern, is the

secretary and treasurer of the company; F. L. Brigham, president, and G. G. Bowersox is the superintendent.

**Allegheny, Pa.**—A charter has been granted to the Park Garage Co., with a capital stock of \$25,000.

**New York**—The Ideal Power Co. has been incorporated with a capital stock of \$5,000, to manufacture motors, vehicles, etc., in a local plant.

**New York**—George W. McGuire, Jr., & Co. have incorporated with a capital stock of \$1,000 to manufacture specialties for motor cars, carriages, etc.

**Detroit, Mich.**—The Fee-Vincent Electric Car Co. has filed articles of incorporation with a capital stock of \$12,000. Plans have already been filed by the company for a garage to be built at Jefferson avenue and St. Antoine street.

**Detroit, Mich.**—Robert L. Fee will build a garage on property which he recently purchased on Jefferson avenue. He will operate a company devoted exclusively to the housing of electric vehicles under the name of the Fee-Vincent Co.

**Pontiac, Mich.**—The Rapid Motor Vehicle Co. is receiving bids for the addition to its plant. A new woodworking department, a testing house and a dry kiln are among the improvements contemplated. After the new buildings are completed the

company will be in a position to make its own bodies and do all the woodwork required on each machine.

**Chicago**—The Orlando F. Weber Co. has leased the property at 1322-1326 Michigan boulevard for a term of 15 years.

**Seattle, Wash.**—In the near future the Seattle Auto Co. will remove to a new brick garage on Pike street, near Tenth.

**Minneapolis, Minn.**—The Jordan Auto Co., local agent for the Corbin, Franklin, Locomobile and Peerless, has added the Apperson to its list.

**Seattle, Wash.**—A charter has been granted to the Novelty Motor Co., with a capital stock of \$10,000. The incorporators are C. M. Smith, G. W. Coover and H. G. Smith.

**Connersville, Ind.**—The Central Mfg. Co. has increased its capital stock from \$50,000 to \$100,000. The company manufactures buggy and motor car bodies. President W. B. Austed was formerly president of the Lincoln Carriage Co., of Greensburg.

**New York**—Herman P. Bell, vice-president of the American Locomotive Automobile Co., is slated to succeed James S. Segue as vice-president of the American Locomotive Co., in charge of the mechanical engineering and designing department.

**Philadelphia, Pa.**—The Diamond Motor Car Co. has been incorporated under the laws of the state of Pennsylvania as the Girard Motor Car Co. Headquarters will be maintained by the company at 238 N. Broad street, where it will handle the Cleveland, as heretofore.

**Newark, N. J.**—The New York Auto Top Co. has opened a shop at 286 Halsey street. It will be under the management of F. Wolf, formerly with W. D. Duane, of New York city. The company will do all kinds of upholstering and repairing of tops, as well as manufacturing new tops.

**Goshen, Ind.**—A new company, to be known as the Oswald Co., has been organized here with a capital stock of \$10,000, and will manufacture gasoline engines. Elmer Newell is the president of the concern; J. W. Miller, vice-president; O. M. Curtiss, treasurer and manager; Chas. Shoup, secretary, and W. T. Oswald, superintendent.

**Indianapolis, Ind.**—It is probable another motor car manufacturing plant will be located here. H. R. Averill, vice-president of the Cameron Car Co., of Brockton, Mass., is searching for a suitable location, either in Indianapolis or one of the neighboring towns. If a favorable site can be secured the company will remove its entire plant here in the near future.

## RECENT INCORPORATIONS

**New York**—Alpino Automobile Co.; capital stock, \$12,500; to manufacture motors, engines, machines, etc.; incorporators, F. S. Keller and Leroy Ayers.

**Yonkers, N. Y.**—Will Young Appliance Co., capital stock \$125,000, to manufacture motors, engines, machines, etc. Incorporators, Benjamin Briscoe and J. D. Maxwell, of Tarrytown; H. E. Tobey, of Brooklyn, and J. A. Dally, of Ossining.

**Camden, N. J.**—Northwestern Motor Car Co., capital stock \$15,000, to manufacture motors, engines, machinery, etc. Incorporators, A. D. Datz, B. A. Balfour and G. H. D. Martin.

**East Orange, N. J.**—Standard Pneumatic Wheel Co., capital stock \$200,000, to manufacture motor cars, motors, marine engines, machinery, etc. Incorporators, C. O. T. Geyer, F. C. Ferguson and E. M. Smith.

**New York**—John S. Lang's Sons & Co., capital stock \$100,000, to manufacture bicycles, motor cars, vehicles, etc. Incorporators, G. E. Relyea, J. H. Richards and A. G. Cross.

**New York**—Automobile Registration and Information Co., capital stock \$5,000, to furnish advice relative to motor cars and their registration. Incorporators, A. M. Lederer, W. P. Frank.

**Buffalo, N. Y.**—Thomas Auto-Bi Co., capital stock \$30,000, to engage in the manufacture of motor cycles. Incorporators, C. E. Becker and John W. Van Allen, all of Buffalo.

**Camden, N. J.**—The Williamson Motor Co., capital stock \$100,000, to manufacture cars, engines, wagons, etc. Incorporators, W. M. Swain, B. L. Johnson and J. C. Williamson.

## OFFICERS

ISAAC B. POTTER, President.  
Potter Building, New York.

CHARLES E. DURYEA, First Vice-  
Pres., Reading, Pa.

JOHN A. HAWKINS, Second Vice-  
President, Pittsburg, Pa.

FRANK A. EGAN, Secretary,  
132 Nassau St., New York.

FREDERICK B. HILL, Treasurer,  
32 Bimford St., Boston.

**National Headquarters**  
Vanderbilt Building, New York

# American Motor League



## THIS LEAGUE

Is Now Collecting Route Infor-  
mation

covering all automobile routes in the important states and will publish road books for motor car users as fast as complete information is received. The A. M. L. is the only organization engaged in this work, and it invites the co-operation of all persons interested. For full information and membership blanks address American Motor League, Vanderbilt Building, New York City.

### Official Hotels Named

The following official hotels have been added to the list since last announcement: Baggs hotel, Utica, N. Y.; Rockwell house, Glens Falls, N. Y.; Nelson house, Poughkeepsie, N. Y.; Sagamore-on-Lake-George, Sagamore, N. Y.; Hotel Thorndike, Boston, Mass.; Atlantic house, Nantasket, Mass.; United States hotel, Saratoga Springs, N. Y.; Windsor hotel, Saratoga Springs, N. Y.; Kenmore, Albany, N. Y.; Perham's Inn, Northfield, Mass.; Ben Mere Inn, Lake Sunapee, N. H.; Elton, Waterbury, Conn.; Crocker house, New London, Conn.; Kittatinny, Delaware Water Gap, Pa.; Osburn house, Rochester, N. Y.; Profile house, White Mountains, N. H.; Hotel Rennert, Baltimore, Md.; Lake Side Inn, Averill, Vt.; Hotel Schenley, Pittsburg, Pa.; Colonial Arms, Gloucester, Mass. All hotel appointments are made with care, and only upon recommendation.

### Prize Motor Car Contest

On January 1 last the league offered as a first prize a new Maxwell, tour-about to the member who should do the most effective recruiting work up to June 30 of the present year. The offer of this prize does not seem to have excited a great amount of interest. Members are being sent in but competitors for the prize are not numerous enough. This is by all odds the most handsome prize yet offered for work of this kind and a circular giving full particulars will be sent on request.

### Official Stations Appointed

The following stations have been added to the official list since the last announcement, February 21: Graf & Canner, Livingston street, Saugerties, N. Y.; Nelson Automobile Co., 214-216 Main street, Springfield, Mass.; Fawkes Automobile Co., 111-113 South Sixth street, Minneapolis, Minn.; Fawkes Automobile Co., 202-206 West Sixth street, St. Paul, Minn.; E. E. Sly, 38 Woodlawn avenue, Norwalk, O. Auto Inn, 345 West Second street, Elyria, O. These appointments will be noted in our next official list which will be printed in time for distribution before the opening of the touring season. In the meanwhile all members are recommended to patronize these stations whenever possible and to encourage the business of the proprietors in every reasonable way. Each official station of the league is

under contract to allow a discount of 10 per cent from regular prices in transacting business with league members, it being understood, however, that to secure this discount the member must exhibit to the proprietor an unexpired membership card. Discounts do not apply to bills of less than \$1.

### League Clubs Added

The Lawrence Automobile Club, of Lawrence, Kan., has adopted a resolution requiring all members of the club to become members of the A. M. L. The membership list has been sent by Secretary Knight to league headquarters and all members of the club have been duly enrolled. The subject of league clubs brings many inquiries to the secretary and seems to be not fully understood. The theory upon which the league proceeds in forming its clubs, and in bringing existing clubs into the organization, is this: The best work of the league and in many cases the only good work for motoring must be done locally. All motorists who are benefited by this work should support it. But all motorists will not join clubs and only about 10 per cent of American motorists are club members at this time. It does not seem likely that this proportion will increase. The A. M. L. seeks to unite into one national body all motor car users, whether club members or not. The league recognizes the need of the local body and to encourage its work it is so arranged that all league dues received from members in each state are divided in equal parts between the national body, the state division and the league clubs within the state. By this means the good work of each club is supported by motorists who are not club members and through the league they are made to add funds to the club treasury. A league club never is called upon to pay money to the A. M. L. and no tax is imposed upon the club treasury by reason of the affiliation. Whether the members of a club become league members is a question for the members themselves to decide—each for himself—it being provided, however, that in the division of league funds the amount received by each club shall be proportionate to the number of club members whose names are on the league roll. Under this arrangement each club member who joins the league knows that a portion of his

league dues will be returned to his club and devoted to a useful purpose—guide boards, danger signs, good roads, etc.—and that every member brought into the league by his efforts will contribute in like manner to the treasury of his club. This entire subject of A. M. L. club membership will be fully explained in a little circular soon to be sent out by the secretary of this organization.

### About State Divisions

Every motor car user in the United States, whether he knows it or not, has an interest in the success of this league. The time has come when all should get together and become acquainted. For several years the burden of work has been carried by the national body and the recruiting has been managed from league headquarters. The membership has grown, and is growing; but, in the nature of things, the league has been dealing with its members at long range, and its officers are at times somewhat in the dark. If the reader of this paragraph is a man of serious purpose, is willing to take up the earnest and useful work of the A. M. L. and to do something, be it ever so little, to advance its growth, and increase its influence, he is the man from whom the secretary is anxious to hear. Let him not hide himself away or be lost by a burden of lost modesty. A short letter addressed to the secretary, stating that the writer believes in organization and is willing to cooperate in bringing together the motor car users in his state will bring grateful acknowledgment and a few "pointers" for future procedure.

### Membership Blanks

Two hundred thousand membership blanks will be delivered at headquarters within the present week. By special printing these can be used by state division officers in their several jurisdictions and memberships received from each state will be duly credited. From time to time membership blanks are distributed among our members and this means that these members are expected to bring the league to the attention of others whose names should be upon the roll. The league began with nothing. It has progressed slowly but steadily to a point where its usefulness is being asserted. This usefulness will increase as the league becomes strong enough to carry added burdens.